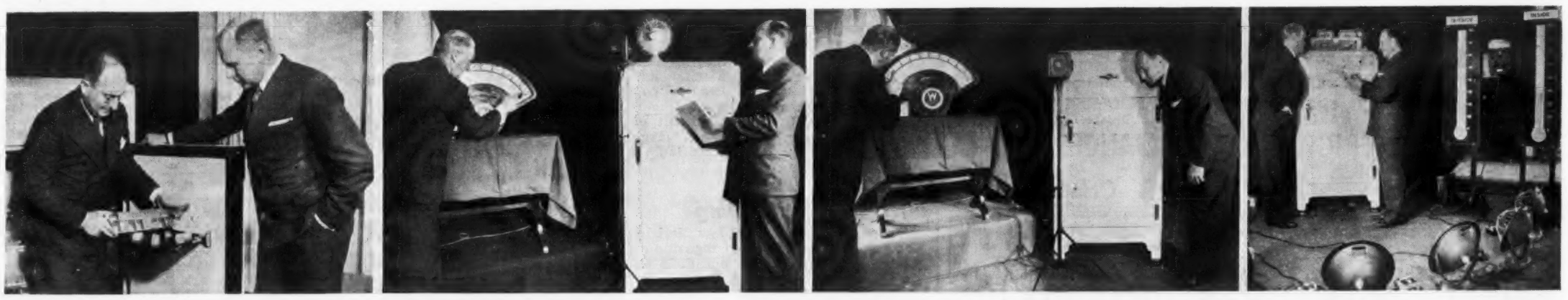
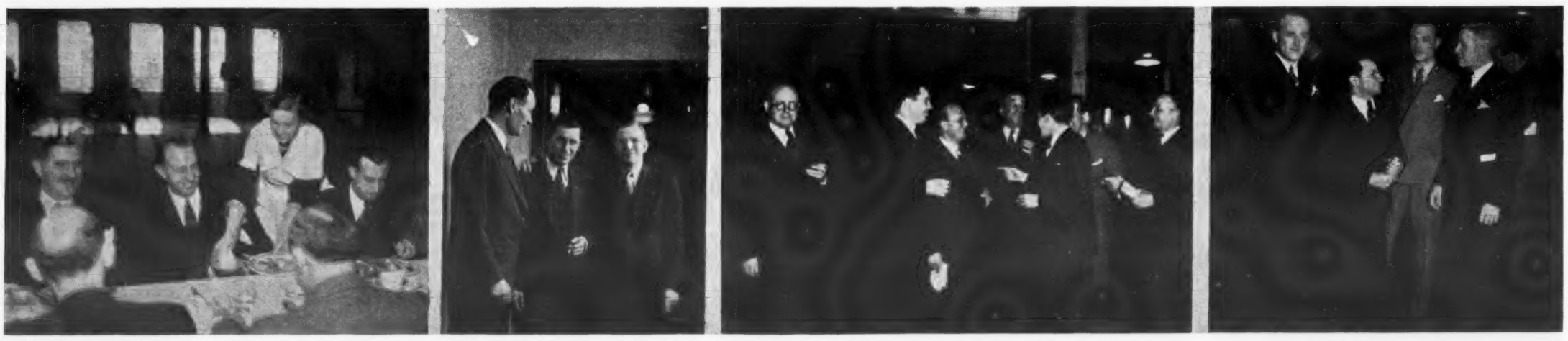
Westinghouse and Crosley Men Relax Between Sessions

(1) C. H. Kaufman of Los Angeles, and J. L. Fitch of Chicago, both of the Westinghouse Electric & Mfg. Co., feel pretty good about the appearance of the new Westinghouse line. (2) G. T. Dunklin of Westinghouse tells a new one to H. M. Wible, manager of commercial refrigeration. (3) E. B. Ingraham of Times Appliance Co., New York City Westinghouse distributor, and one of the "big" men in the Westinghouse selling organization, poses with Ray Cosgrove, manager of household refrigeration sales for Westinghouse. (4) A. R. Lindburg, St. Louis distributor, counts on his fingers how many thousand refrigerators he expects to sell in February, while Ray Cosgrove grins his approval.

(1) Paul Wilmore looks over the menu with an expectant eye. (2) Gil Baird, sales promotion manager, makes a profound study of a strip of candid camera prints. (3) The same Mr. Baird makes a phone call from his hotel room. (4) A. A. Trimble, the man who looks like Will Rogers, signs the register.



Editors of business papers, newspapers, and magazines saw an advance display of the new streamlined Westinghouse refrigerators in New York City last week. A. E. Allen, vice president, and Ray Cosgrove, household refrigeration manager, were the unveilers and the interlocutors. (1) Mr. Cosgrove demonstrates the new self-ejecting all-metal ice tray while Mr. Allen watches approvingly. (2 and 3) The noise test. (4) The temperature test. All over the country this year prospects will witness these performance tests.



(1) Powel Crosley, Jr., president of Crosley Radio Corp., gets the ice cream. Curt Wessel at left, John P. Rogers, assistant general manager, Crosley Radio Corp., at right. (2) Left to right, J. W. Beckman, director of public relations, Crosley Radio Corp.; George H. Lasley, Crosley district manager in southern territory; Ben Boren, Crosley distributor, Little Rock, Ark. It's hard to catch these alert Crosley fellows unawares. (3) Left to right: Douglas Wallace, assistant general merchandise manager, Graybar Electric Co., Philadelphia; A. L. Hallstrom, district manager, Graybar Electric Co., Philadelphia; Frank T. Hogan, Jr., Crosley district manager; D. H. O'Brien, general merchandise manager, Graybar Electric Co., New York City; H. E. Richardson (in foreground) assistant to the president of the Crosley Radio Corp. (4) Hymen Reader, second from left, new Crosley distributor at Houston, Tex., talking to Harry Roper, extreme right, Crosley district manager for Texas. H. B. Kaltenhauser, extreme left, and Charles Green, second from right, are sales representatives for Reader's. They-uns found it pretty cold up Nawth.

(1) James E. Aitken, Crosley distributor at Detroit and Toledo, and Lee Bird, Crosley field service manager, engage in a short-wave conversation. (2) Left to right: H. E. Richardson, assistant to Powel Crosley, Jr.; C. S. Tay, manager, Crosley Distributing Corp., Chicago; Herbert Heib, Crosley distributor, Des Moines, Iowa. This is the way we like to catch 'em. Tay's expression is particularly natural. (3) Left to right: C. B. Leinbach, Brighton Co., Reading, Pa.; Paul B. Eshelman, Crosley distributor, Lancaster, Pa.; Harry Green, Dallas Electric Supply Co., Crosley distributor at Dallas, Tex.; Harry Roper, Crosley district manager for Texas; and Herman Hass, order department, Crosley Radio Corp. They have just had a good lunch in the Crosley cafeteria, and are returning for the afternoon session. (4) E. C. White (left), manager of Carolina's Auto Supply Co., Crosley distributor in Charlotte, N. C., tries to transfix the cameraman with a hypnotic eye; but Wade Montgomery, treasurer, Carolina's Auto Supply Co., has no Rasputinish illusions, and thinks it's all good clean fun.

THE NEWSPAPER OF THE INDUSTRY

ELECTRIC REFRIGERATION NEWS

WRITTEN TO BE READ ON ARRIVAL

Registered U. S. Patent Office

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'Gadgets' To Be Emphasized in Sparton Selling

Antifrost Clock & New Baskador Arrangement Chief Features

By George F. Taubeneck

JACKSON, Mich.—"Sell by the clock" will be the watchword for Sparton dealers this season, and by that slogan Sparks-Withington sales executives mean that they should emphasize the "ahead of time" gadgets—led by the Antifrost electric clock—in selling the Sparton "extra feature" refrigerator. Prices range from $119.50 for a 4.6-cu. ft. box to $256 for the 9-cu. ft. model.

These gadgets include:

Antifrost electric clock, which automatically defrosts the unit, built into the top of the cabinet. It can be set easily with two little knobs which appear on each side of the clock. Capt. William Sparks, president of the company, calls this "tuning in" the clock.

Baskador, a wire arrangement that screws onto the back of an ordinary-type refrigerator door, and affords shelf space for eggs and other small articles.

Combination ice tray release and bottle opener, a hand tool with which frozen ice trays may be pried loose and pulled out.

Vegabin, a swing-open compartment for bulky foods which normally do

(Concluded on Page 20, Column 1)

'Streamline Styling' Features Coldspots

NEW YORK CITY—Styled by Raymond Loewy, famed designer of motor cars, the 1935 Coldspot (Sears Roebuck) electric refrigerator resembles the previous Coldspot about as much as a 1935 Ford resembles a Model T. Its design is an advanced and distinctive example of the modern streamline motif, and is notably different from any other refrigerator on the market.

As shown by E. Gudeman of Sears, Roebuck & Co. to a group of newspaper, magazine, and business paper editors in New York City, Jan. 17, the new Coldspot has a row of storage drawers along the bottom of the food compartment, split shelves for tall bottles, a patented "finger tip" release which loosens all the ice trays

(Concluded on Page 2, Column 3)

Electrolux Has New Features, Styling

NEW YORK CITY—Smart styling and a number of new features and refinements characterize the seven models which comprise Servel's 1935 line of air-cooled Electrolux refrigerators.

Cabinet design has been altered to include streamline effects, with rounded corners, flat table top, a push or pull easy-operation door latch, torpedo-shaped hardware, and one-piece porcelain interior.

Other "convenience" features incorporated in the new models include handy trigger ice cube tray releases, a special tray equipped with an inner ice cube release and a rubber grid, to facilitate the removal of the individual cubes.

The three largest models also have a hinged shelf action, which pivots

(Concluded on Page 20, Column 5)

Montgomery Electric Is Kelvinator Distributor

BALTIMORE — Montgomery Electric Co., Inc., a subsidiary of Barber & Ross, Washington, D. C. Kelvinator distributor, has been appointed Kelvinator distributor for Baltimore.

As an initial step toward effecting a dealer set-up, Montgomery Electric is holding an individual dealer showing of the 1935 line of Kelvinators at the Southern hotel this week. Merchandising, sales promotion, and advertising plans will be presented to dealers at the preview.

C. Camp, manager of Montgomery Electric Co., Inc. is presiding at the meeting.

Geoffrey M. Johnston

Kaiden Studios.

NEW YORK CITY—Geoff Johnston is dead. The amiable, capable, and lovable president of Universal Cooler Corp. and chairman of the Refrigeration Division of National Electrical Manufacturers Association died at 8:45 Thursday morning, in his room on the 21st floor of the Commodore hotel here.

A sudden heart attack caused his death. He retired about 10 o'clock Wednesday night, in the best of spirits, and apparently in good health. Very shortly, however, he was seized by an intense pain. He called F. J. Gleason, secretary of Universal Cooler Corp., who was in a room down the hall.

Enduring an all-night vigil with his beloved superior, Mr. Gleason was forced to watch Mr. Johnston suffer hours of anguish. The house physician was called, diagnosed the trouble as a heart attack, and administered what relief he could.

In the morning Mr. Johnston seemed to have recovered somewhat, and was no longer in great pain. Mr. Gleason went downstairs for a moment, and called Mrs. Johnston. When he returned, his chief was dead.

Mr. Johnston was in New York to defend Universal Cooler against a suit brought by Landers, Frary & Clark over the right to "Universal" as a trade name for electric refrigerators. He had actively participated in the trial, and directed the defense.

Just two nights before his death, the writer had dinner with Mr. Johnston in New York City. Mr. Ruthenburg and Haldeman Finnie, manager of the Refrigeration Division of Nema, were with us.

Never had his delightful humor, broad wit, and keen intellect shown to better advantage than during his stimulating conversation that night.

In his easy, gentle, charming manner he dropped trenchant remarks on the course of business recovery, made penetrating observations on the state of the electric refrigeration industry, and struck out swift flashes of his remarkable insight into men and affairs. He reiterated his admiration of, respect for, and confidence in F. M. Cockrell, publisher of Electric Refrigeration News.

When he left the table for a moment, Mr. Ruthenburg observed: "There goes the most brilliantly delightful personality it has ever been my good fortune to meet in a lifetime of business associations."

It was easy—inevitable—to agree with him.

Throughout the meal he candy-coated his philosophical and psychological remarks with a running fire of the genial banter for which he is so famed throughout the industry. He directed his humorous fire on both Mr. Ruthenburg and the writer—and the laughs were plentiful.

Assuming the presidency of the Universal Cooler Corp. in 1929, Mr. Johnston rapidly brought it out of the doldrums, built its volume, its plant facilities, and its reputation—making it one of the most substantial operations in the electric refrigeration business.

He will best be remembered, however, as the man who, more than anyone else, brought harmony and cooperation to a lusty young industry which, before his advent, engaged in much internal strife and bitterness.

He brought to the chairmanship of the Refrigeration Division of Nema one of the great talents for conciliation and mediation of his time. Under the benign influence of his magnetic personal charm and shrewd ability to handle people, the various warring factions were welded into a unit which has functioned efficiently—and with a united front—for the advancement of the industry. His unselfish efforts on behalf of peace and good fellowship have put the refrigeration industry forever in his debt.

—THE EDITOR.

Daily Leaves G-E To Form Agency; Scaife Steps Up

CLEVELAND—A. L. Scaife, formerly head of the retail division of General Electric Co.'s specialty appliance sales department, has been named sales promotion and advertising manager to succeed Walter J. Daily, who is resigning to establish an advertising agency in this city.

W. D. Galpin of Bridgeport, Conn., has been appointed retail sales manager to succeed Mr. Scaife.

Following the World War, in which he served as a naval officer, Mr. Daily began his career in the advertising

(Concluded on Page 3, Column 1)

Appliance Policies Outlined by Stores

By George F. Taubeneck

NEW YORK CITY — Department store executives are apparently human after all. In contrast to the surprisingly common opinion that a department store head is a cold-blooded statistician who runs his business solely by balancing graphs, charts, and vast columns of figures, the National Retail Dry Goods Association, in convention assembled here last week, unanimously adopted a "report on social security" which includes a comprehensive insurance plan for unemployment, old age, maternity, death of the family breadwinner, sickness, and disability.

Furthermore, the electrical merchandise division of the association went on record as favoring outside selling, preserving manufacturers' list prices, discouraging "spiffs" to salesman, and making the widest possible use of specialty selling methods.

No less than four of the sessions (the convention ran morning, luncheon, afternoon, dinner, and evening sessions for four days) were devoted to electrical appliances.

Under the active direction of Herschel Lutes, division merchandise manager of the J. L. Hudson Co.,

(Concluded on Page 8, Column 1)

Bonning Will Head Potter Sales Work

BUFFALO—John C. Bonning, formerly vice president of Landsheft & Bonning, Inc., Buffalo advertising agency, has been appointed merchandising director of the Potter Refrigerator Corp., according to an announcement made last week by T. Irving Potter, president of that company.

Mr. Bonning's background embraces over 20 years experience in many phases of sales and advertising—both in agency and industrial fields. His contact with refrigeration dates from 1920, when he prepared the advertising for the Jewett ice refrigerators of that time.

For the past three years he has handled the account of the Potter corporation for his agency.

Crosley Plans to Produce 300,000 Units in '35

CINCINNATI—Crosley's production program for 1935 calls for 300,000 Shelvador electric refrigerators, Howard E. Richardson, assistant to the president in charge of sales, Crosley Radio Corp., announced recently.

Early Sales by Carrier Dealers Ahead of 1934

Testimonials at Convention Indicate New Records on Air-Conditioning Sales

By George F. Taubeneck

NEWARK—Money may be lost in more ways than won, but in the minds of the 99 Big Dealers who assembled here early last week for the dealer sales conference of the Carrier Engineering Corp., there was no doubt about whether or not they were going to make money on air conditioning in 1935. Their remarkable sales already in January made them positive that 1935 would be a profitable year for them.

For instance: Jerry Ullman of Air Conditioning, Inc., Baltimore, reported that during the first two weeks of January his company had sold 25 per cent of its entire 1934 volume! Brandeis Machinery & Supply Co. of Louisville reported an even better figure than that, and Carl D. Taylor of the Dravo-Doyle Co., Pittsburgh, announced that already his concern had sold more than 50 per cent of its 1934 volume, and that by the middle of February, 1935, sales will easily have passed the 1934 mark.

Carl Taylor used to be refrigeration merchandising manager of the Westinghouse Electric & Mfg. Co. He is just one reason why these Carrier dealers are called "Big Dealers."

Here are a few others: Dave Trilling of Trilling & Montague, nationally known Philadelphia Norge distributor; C. L. McCrea, National Electric Supply Co., Washington, D. C., leading General Electric distributor; Ray Harten of Harten-Knodel Distributing Co., Cincinnati, cup-winning Norge distributor; F. C. Geiler, formerly chief engineer of Trupar, of Automatic Coal Burner Co., Dayton; J. A. Paradis of Brandeis Machinery & Supply Co., Louisville; and Julien Loeb of Specialty Service Corp., Brooklyn, which was one of the nation's biggest Majestic distributors.

These Carrier *dealers* are *distributors* of other products. They have big territories for Carrier—protected ter-

(Continued on Page 15, Column 5)

G-E Will Introduce '35 Line March 1

CLEVELAND—General Electric will offer its 1935 refrigerator models to the public about March 1, with sealed-in-steel mechanism in the flat-top line, as well as in the Monitor Top and liftop lines, according to information given out following the closed meeting of G-E distributors held here Jan. 8 and 9.

Attention of the distributors at the convention was focused on the following additional developments:

New range models will be available early in the spring, with new styling and lower prices.

A new dish-glass washer for restaurant use will be placed on the market soon.

Advertising and sales promotion appropriations have been increased; with new direct mail and national advertising scheduled to break in March.

A new sales campaign, to be known as "Refrigerania Sweepstakes," to run

(Concluded on Page 2, Column 4)

Last Call for Directory Listings

A last call for listings in the 1935 REFRIGERATION DIRECTORY (VOL. 1) is being sounded this week.

It is too late to get listings in the Alphabetic and Trade Name sections, which will go to press this week, but additional listings and corrections can be submitted for the other sections. The Geographic Section won't go to press until next Thursday, Jan. 31, while the Classified Products Section is scheduled to go to the printers Thursday, Feb. 7.

Advertisers have through Tuesday, Feb. 5, to submit new copy for *reserved* advertising space in the Classified Products Section. In this section, all manufacturers are listed under product classifications. Most companies will want their advertisements in this section adjacent to the free listings.

Wednesday, Feb. 6, marks the last day that corrections can be made in advertisements for the Classified Products Section.

All forms of Volume 1 of the 1935 REFRIGERATION DIRECTORY are due to go to the bindery Monday, Feb. 11. This will be the last day for acceptance of completed printed *inserts* which may be bound in between forms or sections of the book.

The DIRECTORY will be ready for mailing about Feb. 20. The first copies from the bindery will go to those whose paid-in-advance orders are on file.

Wanamaker Becomes Frigidaire Dealer

BROOKLYN—John Wanamaker Co. has taken over the retailing of Frigidaire products here, following completion of a working arrangement with the Frigidaire Corp., and is occupying the showrooms which formerly housed the company's retail outlet.

For the time being, the Brooklyn store will feature Frigidaires; and in addition will carry the complete line of major appliances sold by Wanamaker's in New York City. A staff of 15 outside salesmen are working in Brooklyn, Queens, and Nassau counties selling the complete line of appliances. Most of the men were former Frigidaire employees.

Leo Roberts, previously with Frigidaire, is managing the store, which is under the general supervision of Ernest Maserve, major electric appliance buyer for Wanamaker's.

Ferro Furnace Placed In Kelvinator Plant

CLEVELAND—The Ferro Enamel Corp. of this city has announced completion of the installation of a propane-fired continuous porcelain enameling furnace at the plant of Kelvinator Corp. in Grand Rapids, Mich.

The Kelvinator furnace is one of the largest continuous-type ever built.

Minor Electric Named Crosley Dealer

RICHMOND, Ind.—Minor Electric Sales of this city has been designated dealer for Crosley refrigerators and radios by the Kiefer Stewart Co.

In Modern Dress

Closely resembling a modern building in its lines, the 1935 Coldspot was designed by famed Raymond Loewy.

TVA Uses Movies to Tell Appliance Program

BIRMINGHAM — The Tennessee Valley Authority is now using a moving picture to publicize its New Deal projects, including the use of electrical appliances.

The five-reel sound picture was shown for the first time at Florence, Ala., and is being booked for a number of points in the Tennessee Valley.

Coldspot Restyled, Unit Unchanged

(*Concluded from Page 1, Column 1*)

at once, and a glass rolling pin in which ice cubes may be kept.

Perhaps the most unusual single feature of the refrigerator is the long bar on one side of the cabinet which is the "feather touch" door opener. It bears no resemblance to any previous type of door handle or opener.

Massive in appearance, the box is mounted on a heavy white base. The evaporator is placed in the center, and has a porcelain door.

Refrigeration is supplied by the same Rotorite unit, manufactured by Sunbeam in Evansville, Ind., which has powered previous Sears, Roebuck refrigerators.

Just two sizes of this new refrigerator—which will be introduced to the public in February—will be available. Smallest has 6.2 cu. ft. capacity; in lacquer finish it will sell for $139.50, and in porcelain it will be $159.

The 8-cu. ft. box will be offered only in porcelain, and is to be priced at $189. Equipment and design of these three boxes will be identical.

G-E Contracts Corp. Opens 3 New Offices

NEW YORK CITY—To establish a closer contact with General Electric distributors and dealers and to aid customers who have purchased G-E appliances on the budget payment plan, General Electric Contracts Corp. has opened three additional offices.

The new offices and the men in charge of them are as follows: Harrisburg, Pa., C. W. Wells; Richmond, Va., R. G. Tinnerholm; and Charlotte, N. C., R. E. Joines.

Styled Interior

The modernistic motif is carried out in the Coldspot interior, with horizontal-line designs on the chromium evaporator door and the fronts of the storage drawers in bottom of the compartment.

G-E Will Introduce '35 Line March 1

(*Concluded from Page 1, Column 5*)

in the south from March 18 to May 18; and in the north from April 1 to June 1.

Regional sales conventions to be staged in about 60 leading cities starting Jan. 30; three traveling troupes from national sales headquarters in Cleveland conducting the meetings.

Keynote of the distributors' convention was sounded by P. B. Zimmerman, manager of the company's specialty appliance sales department, who pointed out that this was the earliest General Electric ever had been in a position to discuss new products for the year. He predicted that the industry would sell 1,500,000 electric refrigerators this year.

Improvement in the B.t.u. capacity of G-E refrigerating units, with a corresponding reduction in the operating costs, was announced by W. M. Timmerman, commercial engineer.

Dish-Glass Washer

C. M. Snyder, dishwasher division manager, in announcing the new General Electric dish-glass washer for commercial applications, which will list at $199.50 and is available for immediate delivery, said that the G-E dishwasher business last year was 238 per cent over that of 1933.

During the past few months a new addition to the Fort Wayne, Ind., commercial refrigeration factory has been completed, with the result that manufacturing facilities this year will be greatly facilitated, W. E. Landmesser, commercial manager, told the distributors.

He discussed the wide range of commercial applications; and said that during last year G-E had made hundreds of special commercial applications.

These installations, of course, were in addition to the regular installations of display cases, water coolers, and other parts of the commercial line.

Stressing the importance of the small town market, A. A. Uhalt, dealer division manager, said that the so-called rural sections would do much more buying in 1935. He also predicted that the Federal Housing Administration program would be of material aid to sales.

Utilities Plan Campaigns

H. H. Bosworth, manager of the central station division, declared public utility companies generally were preparing for increased sales of all electric home appliances. He predicted that a large number of utilities would push the Liftop refrigerator models, especially among minimum bill customers.

Many operating companies, he said, have from 30 to 60 per cent of such customers who use current for little more than lighting, and thus are classed as unprofitable consumers. By adding a refrigerator, such as the low-priced chest type model, such consumers would be lifted into the profitable category, he declared.

There is an ever broadening replacement business in the apartment house field, George Kobick, apartment house division manager, told the distributors. Approximately 25 per cent of the business of his division, he said, was that of replacing old refrigerators in apartment suites.

About 100 department stores will be added within the next two or three months to the list of such outlets now handling G-E home appliances, stated R. C. Cameron, in charge of department store activities. To date, approximately 150 department stores are carrying the G-E line, either as dealers or as resale operations.

The new sales campaign is expected to exceed, in results, the campaign of last fall when approximately $7,000,000 worth of G-E appliances were sold. The spring sales contest was explained by Jean DeJen, sales campaign manager.

Importance of selling all electric home appliances—known among G-E outlets as doing a "balanced sales job"—was stressed by W. D. Galpin, new G-E retail sales manager.

"The 'balanced job' means better and more uniform earnings for the salesman," he said. "Thus a person who buys a refrigerator can be turned into a prospect for a range, washer, ironer, or another electric home appliance."

M. D. Grow of the retail division stressed the importance of proper sales training and pointed out that 5,185 salesmen have enrolled in the G-E-LaSalle sales training course. So far, 1,863 salesmen have graduated from the correspondence course.

The advertising and sales promotion activities, and retail sales helps, were discussed by W. J. Daily, retiring sales promotion manager, and A. L. Scaife, new sales promotion head. Advertising will be increased this year, while new direct mail will be available for the start of the spring sales campaign. Scaife, who has been retail sales division manager, presented the sales tools available to dealers and salesmen.

Mr. Daily, who has resigned his position to head his own advertising agency, was presented with a G-E radio by the distributors.

Home service plans for 1935 were outlined by Miss Edwina Nolan, G-E home service director; while Paul H. Dow, head of the kitchen section of General Electric Institute, announced that 50,000 people went through the institute during its first year of operation. Cedric Smith, financial division manager, said that 1935 plans are designed to induce dealers to place displays of merchandise on the floor earlier than heretofore. N. B. Ronning and W. C. Noll, managers of the distribution and product divisions, respectively, outlined plans of their divisions for cooperation with retail outlets.

Guest speakers on the convention program included Chris Steenstrup, chief engineer of the company's refrigeration department, Schenectady, who talked on the sealed-in-steel mechanism; Jack Bryant of Dallas, Tex., dishwasher specialist for the distributorship there; and H. G. Selby, Maxon, Inc., Detroit, who discussed advertising media.

Onondaga Supply Co. Will Distribute Frigidaires in New York Area

SYRACUSE, N. Y.—Appointment of the Onondaga Auto Supply Co., of this city and Watertown, N. Y., as distributor for Frigidaire household and commercial refrigerator and air-conditioning equipment for north central New York state was announced recently by T. A. Farrell, regional manager, Frigidaire Corp.

The company is now distributor for part of the area formerly served by the Buffalo branch of Frigidaire Corp.

In addition to refrigeration, the company is distributor for radios, major appliances, and automobile accessories and supplies. H. H. Weisberg is president and B. S. Arnold, general manager.

Tennessee Power Ends Sales of 'Interims'

CHATTANOOGA, Tenn.—Tennessee Electric Power Co., southern public utility, has discontinued sales of its $79.50 TVA "interim model" Frigidaire electric refrigerators, and announced that effective Jan. 16 it would concentrate on the standard 4-cu. ft. unit selling for $111.50.

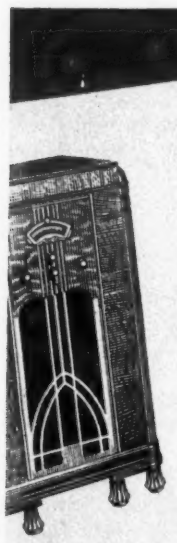
The company conducted an intensive campaign to dispose of as many of the "interim models" as possible before Jan. 15, offering terms of $3.50 down and small monthly payments. Whatever stock was left will be rebuilt and priced the same as the standard Frigidaire 4-cu. ft. models, it was announced.

Nebraska Power Opens Model Home

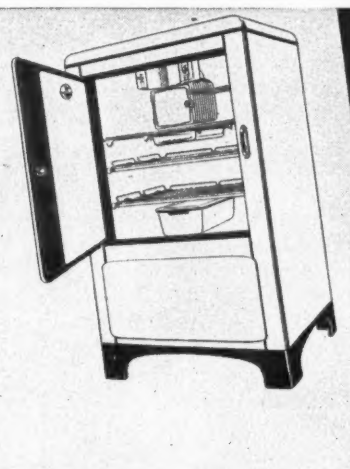
OMAHA — An all-electric kitchen, designed by General Electric's kitchen planning department at Nela Park, is a feature of the model home which Nebraska Power Co. has erected on its display floor here.

Equipment includes a G-E refrigerator, dishwasher-sink, Hotpoint range, built-in cabinet lighting, exhaust fan, and convenience outlets.

Other features of the exhibition home are air conditioning and unique lighting facilities. Doorway lighting at the front entrance is provided, and an "electric eye" set in the door, rings a chime whenever a person crosses the threshold. Lighting in the living room consists of indirect cove illumination, center ceiling lights, lamps, wall fixtures, and built-in-lights in an alcove at one end of the room.



LOUIS C. SCHRODER
Capital 6366
RADIOS · REFRIGERATORS
Radio Repairing
3653 J Street
Sacramento, Calif.



Dec. 29, 1934

Stewart-Warner Corp.,
1841 Diversey Parkway,
Chicago, Illinois.

Gentlemen:

We were certainly glad to see the ad of the Pendleton Music Store in the Refrigeration News of December 19, 1934 -- in fact that has been our same experience, and we are now 100% Stewart-Warner.

We have been telling the public this same story, and after reading the statement of the Pendleton Music Store we believe that it would be of tremendous benefit if we could run an advertisement along this line in our local newspaper. Can you supply us with a plate or matrix?

For your information, we just purchased one solid carload of Stewart-Warner refrigerators from our distributors, the Moore Electric Company of San Francisco, California.

Thanking you for your attention to the above, we are

Very truly yours,
Louis C. Schroder

"... Now 100% Stewart-Warner"

The amazing, trouble-free performance record of the Stewart-Warner Refrigerator—*its proven ability to make retail profits* NET *by taking "servicing" out of the picture*—has caused scores of dealers to swing their entire sales efforts to this line in 1935. These dealers know, from actual experience, that Stewart-Warner's matchless mechanism lets them *keep* their earnings. And they're making sure of profits that will *stick*.

How are you set up? Have "service expenses" been *gnawing* at your profits? Then, get in touch with your Stewart-Warner distributor or write us direct for full details on "The Line Without a Service Problem" and complete merchandising plans for 1935.

STEWART-WARNER CORPORATION
1841 Diversey Parkway, Chicago, Illinois

Scaife Will Succeed Daily at G-E

(*Concluded from Page 1, Column 4*)

field with the Federal Advertising Agency. Five years later he transferred to Thomas L. Logan, Inc., advertising agency, and finally joined the General Electric Co. at the time when T. K. Quinn, P. B. Zimmerman, and L. R. Edwards were marketing the "Monitor Top" refrigerator.

Mr. Daily started with the G-E organization as sales promotion manager. Later, while retaining the same title, he was also placed in charge of General Electric refrigeration advertising. He is a graduate of Yale university.

Mr. Galpin, the new retail division manager, spent a number of years in Europe with the International General Electric Co. and in South Africa, his native country, in the employ of the South Africa General Electric Co. at Johannesburg.

Returning to the United States he joined the sales staff of the G-E home laundry equipment department at Bridgeport, Conn., at the time of its organization. More recently he was transferred to the Bridgeport headquarters staff. His chief activity will be the promotion of a balanced job of retail selling on the part of G-E distributors and dealers.

Other personnel changes in the specialty appliance sales department announced by P. B. Zimmerman, department manager, and effective immediately, are:

A. M. Sweeney has been appointed chairman of the newly created works management committees, electric refrigeration department, for both the Schenectady and Erie plants of the company. He will continue as sales manager of the department with headquarters at Nela Park.

R. C. Cameron, who has had charge of department store sales activities since affiliating with the company three years ago, has been appointed assistant sales manager. He will continue to have general charge of the department store division.

A. O. Anderson has been appointed department store specialist, working under the direction of Cameron. He will make his headquarters in New York City. Anderson, following a long and varied sales career, joined General Electric Dec. 1. For the last four and one-half years he was eastern field manager for the Jam Handy Picture Service, Inc., of Detroit.

W. E. Landmesser, who has been manager of G-E's commercial division since its organization in May, 1928, has been appointed chairman of the newly created Works Management Committee, electric refrigeration department, for the company's Fort Wayne, Ind., plant. Landmesser has been with General Electric 10 years and will continue to make his headquarters in Cleveland.

A new campaign division has been established with Jean DeJen as manager. DeJen also will be a member of the sales committee. DeJen became affiliated with General Electric in 1930 and has conducted the department's sales campaigns.

M. D. Grow, who will continue to be associated with advertising and sales promotion manager Scaife in the preparation and distribution of sales training services, has been made a member of the sales committee.

Wholesalers Propose NRA Amendment

WASHINGTON, D. C.—The electrical wholesale trade, a division of the wholesaling or distributing trade, through its Code Authority has submitted a proposed amendment to the National Industrial Recovery Board for approval, designed to control discount practices.

The proposed amendment stipulates that "it shall be an unfair trade practice for a member of the trade to grant or offer to a customer a discount for cash at a percentage greater than the percentage of discount for cash received by such member on the same merchandise; or to allow or offer to allow extra discounts for anticipated payment; or to allow or offer to allow a discount for cash on accounts remaining unpaid after the tenth of the calendar month following date of shipment; or to grant or offer to grant any discount for cash, whereas payment is made by warrant, note, or trade acceptance."

Public hearing on the amendment will be held Thursday, Jan. 24, at the City Club building, 1320 G St., N. W., here under the direction of Deputy Administrator Frank H. Crockard.

Our Error

In the first column of page 8 of last week's issue of ELECTRIC REFRIGERATION NEWS a story was headlined, "Baltimore Power Firm Is Frigidaire Dealer." The headline should have been "Baltimore Power Firm Is General Electric Dealer," as per the story, which was correct.

Mr. Ted Quinn

Of *Electric Refrigeration News*

Dear Ted Quinn:

The edge probably already has worn off your newness in Cockrell's Detroit menage. We're sure the Electric Refrigeration News gang has made you feel at home. They're like that. They'll make you work your head off but you'll like it better than anything you've ever done before.

Pretty soon they'll shove you out into the field and you'll have to make your way among a bunch of refrigeration dealers scattered from Dan to Beersheba. You'll find them among the best fellows (and gals) you've known anywhere. They're all in an industry that has made its way from scratch and achieved its greatest success during the world's worst business debacle.

You're going to learn about refrigeration from them. They won't mince words and they'll punctuate with pretty lucid adjectives. But you'll learn what's going on and what isn't.

Most everybody in the industry knows about Dry-Zero. But we recognize your newness to this field and we want to take this opportunity to sort of wise you up. Not that you won't die happy without ever hearing of Dry-Zero, but it might help to be in the know. Mr. Cockrell, George Taubeneck, Phil Redeker, Cutting, Congdon and Jack Adams,—yes, and Frances McNamara, too, probably, have been soaking up the Dry-Zero story for some time. We've been telling it straight from the shoulder in Electric Refrigeration News for years.

You'll find wherever you go that dealers and salesmen know about Dry-Zero and will want to talk about it, too, for they keep telling us that Dry-Zero in a refrigerator is one of their strongest selling points.

A number of years ago, Harvey B. Lindsay, now one of the best known men in the industry and president of Dry-Zero Corporation, introduced Dry-Zero Pliable Slab Insulation. He had found, after years of search for the best material on the face of the earth for low temperature insulation, that certain unusual qualities were possessed by the fine, white fibres of the tropical Ceiba tree. (You pronounce that "Seebah", Ted, in spite of the dictionary.) He further discovered that when these moisture-proof fibres were all placed parallel across the line of heat flow, the heat stopping value was increased about 50%.

That was the basis for Dry-Zero Insulation!

George Taubeneck says a "fact" is as dear to you as the Saar to Adolph Hitler. Welcome to our alley, Ted . . . we've built a business on facts. And here's one you can sink your teeth into.

There, doubtless, is no need to remind you that no such thing exists as a refrigerator in which moisture will not in time penetrate into the walls despite "moisture-seals." This is due to the very obvious difference in temperature between the warm outer and the cold inner wall.

But there seems to be an abysmal ignorance on this point. Some dealers don't understand it and if you get into an argument, Ted, take all the bets you can and we'll carry them for you. It is merely the old condensation principle that makes a beer mug sweat. In a refrigerator, the condensation takes place somewhere within the insulation . . . wherever the "dew point" is reached. You might expect that after a few years of service the insulation would be pretty well saturated with water. And to prove that this is exactly what happens with ordinary insulation, you have only to open the wall of a refrigerator that has been in normal service for several years and see how wet the insulation is.

You know what this condition would do to most materials that otherwise might be pretty good heat stops. Sure! They lose almost all their insulating value and the poor old motor has to drag the compressor through endless cycles to try to pull out the heat that gets into the box almost as fast as it is taken out.

It is an interesting fact that non-hygroscopic vegetable fibres are exceedingly rare. No one has ever been able to tell us of another vegetable fibre, aside from Dry-Zero, that will not blot up moisture. That is why Dry-Zero is doing such a swell job of insulation. To begin with, it has the highest rating as a heat stop. It is unaffected by moisture indefinitely. It will never rot, disintegrate or develop odors. And because of these things it gives practically as perfect service in a refrigerator after many years of use as when the box is new.

Sometime, when you are here in Chicago, we want you to see refrigeration's most completely equipped and finest testing laboratory. This invitation has always been open to the entire industry and many of its foremost men have visited this unique laboratory. Here you can see proof of everything we have said. We'd like you to see just how we carry out life tests on all makes of refrigerators and how results are secured electrically and mechanically, so that human fallibility is avoided.

And now, good luck to you in your new work. If you want to know anything more about insulation, drop us a line, and be sure to come in to see us when you can.

Sincerely yours,

Dry-Zero.

DEPARTMENT STORES

Parker Sees Specialty Dealer as Stores' Chief Competitor & Tells How to Combat Dealer Weapons

NEW YORK CITY—"We, at Wieboldts, believe that major appliance selling in 1935 will follow an altogether different trend than that of the past five years, in that the independent specialty dealer is going to be more important than ever before." That was the attention-jerking assertion made by James Parker of the Wieboldt Stores, Chicago, when speaking before the Wednesday morning session of the National Retail Dry Goods Association convention here last week.

"Dealer's credit will undoubtedly expand—manufacturers will no longer be unwilling to sell them; finance houses will no longer call a halt on their time payment selling," Mr. Parker declares in presenting his reasons for believing that the specialty dealer is going to be a more important factor.

"We believe that department store competition next year will be not so much from one another as from a host of specialty dealers. They are the ones, after all, who originally had the appliance business; and then department stores came along to take much of it away from them while at the same time expanding the market.

Forced In by Manufacturers

"It is a singular thing that department stores did not really begin to get excited about major appliances until they were forced into it by manufacturers who, with the advent of the depression, had to get big volume orders. Department stores offered the only market.

"Having had this good business handed to us on a platter, we carved down retail prices to such an extent that the dollar spread between cost and retail did not allow the independent dealer to operate.

"Yet *we* have gone along perfectly contented with this small margin (small in the sense of both percentage and dollars) while all around us specialty dealers with far less overhead than ourselves have gone broke.

"Now, however, retail prices are going up and will go still further in 1935 with the result that big stores will not be able to shoot low priced promotional items as they have heretofore. At the same time the specialty dealer will have his larger dollar margin with which to operate—and remember that unlike so many of us, the specialty dealer pays his expense in dollars rather than percentages.

"What are we going to do about all this?" Mr. Parker asked. "I take it that we shall not stand idly by, that we shall want to do battle with the enemy. I'd like you to think with me, if you will, of appliance selling in 1935 as being a hard fight; and as a convenience let's think in terms of naval warfare — the specialty dealer's fleet against ours.

"Let us then consider what three men-of-war the specialty dealer has.

"The first is *price cutting*, and it's a destroyer. We always regard this ship *price cutting* of his as first in the line. I think, however, it is one we can easily attack and put back to number three position.

"This ship *price cutting* has three gun turrets; deliberate price cutting, excessive trade-ins, and lower finance charges. We must certainly agree that department stores and furniture stores cannot match the specialty dealer in the price cutting business inas much as our overhead is actually higher than his. Since the need of an increase in gross margin is recognized we can't proceed with price cutting.

Could Demand Bigger Discount

"In addition to the methods which we are considering for increasing gross margin it seems to me that we could legitimately demand a bigger discount from the manufacturer than the specialty dealer receives, on this basis (and mind you, I am not being *altogether* facetious)—let the manufacturer levy a charge against the dealer and pay this sum over to us as recompense for our acting as the dealer's show-room.

The dealer's second ship is his *repair business*. Inasmuch as it is not quite so formidable a ship as *price cutting*, it has only two gun turrets. First of these is repairs at a profit. The dealer, in fact, makes so much profit on his repair business that usually he is able to pay the complete cost of the free service which he must render on the goods he sells.

"The second gun, (which is long range, but effective) is his use of repair prospects to sell new appliances. Now the specialty dealer can't posibly operate his repair business without contacting a wide clientele, and the only means of doing this is the use of an outside selling program. He is listed in the 'phone book as an authorized service dealer for several brands of appliances. Above all, he does a good job of repair.

Outside Selling by Dealers

"We come finally to the specialty dealer's most important ship—*outside selling*. It is at once both his flagship and his strongest vessel. Because of its superior strength and speed *outside selling* has four big guns.

"First is close supervision. The specialty dealer is in most instances his own supervisor. He knows personally the traits of every one of his salesmen and they are unable to put anything over on him.

"Furthermore, he himself is usually a graduate of the *outside selling* academy and knows more about the business in all its details than does any of his salesmen.

"He is able to go out with them in closing sales and contacting customers. He is able to demand full time work and careful reports. He knows what to look for in his reviewing of reports.

"In short, he is right on top of the situation every minute.

"Big commissions is the second gun. Whereas most department stores pay anywhere from 4 to 10 per cent commission the specialty dealer begins at 10 per cent and pays more for larger profit and higher priced goods. He pays so *much* commission, in fact, that many times department store salesmen have been tempted to turn over sales to specialty dealers because their mere "cut" from the dealer's salesmen would be higher than the full commisison we would pay him.

"Naturally, big commissions are an incentive for more aggressive selling, although they may be also an incentive for slippery dealing.

"Third gun is better man power, as a result of big commissions, close supervision, and program. Because of the fact that the dealer is in such close contact with the individual activities of each of his men he is able to weed out the weak ones.

"Moreover, the specialty dealer gives his men a much more intensive training, with constant follow-up, than do most department stores.

"We come now to the dealer's biggest and most important battery of guns: program. It has range finders to get new leads; and the guns themselves properly trained on their objective; follow up all leads.

"He also uses his wide variety of club contacts; and digs up new leads from the use of such services as telephone directory, announcement of mariage licenses, birth announcements, and rental changes.

"The dealer is forced to rely a great deal, however, on cold canvass to find new leads. This simply means going up and down the street ringing every door bell. Nothing is so disheartening to salesmen as this; and I shall endeavor to point out to you that in the building of our *outside selling* program we won't need to consider cold canvass."

Having found the range by the use of all these instruments, the specialty dealer's gun battery proceeds to lay down a devastating fire in following up all leads. This fire is effective primarily because it's quick. The dealer usually follows up all of his good prospects within 48 hours. Then, too, it's constant rather than intermittent, and it's thorough.

These, then, are the specialty dealer's four big guns on his ship of *outside selling*: close supervision, big commissions, better man power, and program; and he has three ships of the line: *price cutting, repair business,* and *outside selling*.

Department Store 'Ships'

Thus having scouted the enemy, Mr. Parker outlined the "ships" department stores have.

"Our first, and the one on which we seem to pride ourselves most, is our *buying power*," Mr. Parker declared.

"There are three guns on this ship of *buying power*. The first is an extra discount on nationally advertised brands. There is a good deal of misconception about this, however, and I think many of us would be surprised if we knew how many specialty dealers were getting the same discounts we are and in certain instances bigger discounts.

"For whereas our *total* appliance volume may be larger than that of the dealer, he may sell a great deal more of a particular brand than we do. That manufacturer then often feels justified in giving him a longer discount than he gives us.

Low-Priced Brand

"Second gun is our promotion of off-brands at prices lower than those of nationally advertised products. This gun is sometimes over-rated, too, inasmuch as very often these off-brands misfire. The service cost runs too high. Manufacturers won't co-operate in the matter of repair parts, etc.

"The third gun is that of quantity purchases, particularly of close-outs, which are made primarily to get a lower retail price rather than a longer profit.

"The department store's second ship is that of *advertising and traffic*. Here, also, we have three guns. The first of these is our heavy newspaper advertising. We are equipped to do it and the specialty dealer isn't. The second gun is cooperative advertising which we secure from the manufacturer to match that which we give to his brand out of our own budget. And the third gun is, of course, the matter of store traffic.

"But these three guns are all too often ineffective, for our salesmen are too prone to sell the advertised low-profit merchandise. They are afraid to take a chance of losing a sale by stepping customers up. When we aren't advertising many of them are simply sitting around in the department waiting for customers to come to them. The result is poor morale together with a great deal of 'conniving' and 'griping.'

Reputation Important

"Our third ship is that of *reputation* and it, too, has three gun turrets. The first is better credit. We are able to do business with manufacturers on a better terms basis than is the specialty dealer.

"Second gun is the fact that usually we, the department stores, have been in business longer. The general public knows our name, they know people who have bought things from us over a long period of years. They are inclined to believe that we couldn't have remained in business so long were we not always willing and able to stand back of the things we sell.

"We aren't limited as to the amount of time payment business we'll do, except as we ourselves might set an arbitrary limit. We aren't restricted by anyone but ourselves as to the instalment terms we set up.

"Third gun is the variety of goods which our store offers. Our customers buy from us dresses, groceries, shoes, and a wide variety of other goods. It is natural that they should think also of us when they want to buy major appliances.

"You'll note that the specialty dealer's first ship is *price cutting*. Our salvation in beating this first ship lies in closing our sales before he gets a chance to fire away with his *price cutting*. I would therefore assign two of our ships, namely *buying power* and *advertising and traffic* to head off the dealer's *price cutting*.

"Then there's the specialty dealer's *repair business*. What we must do is build a ship of our own to put alongside his.

"We can have the same two guns as he, namely earning profits and getting leads. Then we have an excellent chance of increasing our effectiveness a bit by adding a third gun—fair prices. In other words, let's not follow the dealer's example and over-charge terrifically on repairs so as to force a customer into buying a new appliance.

"We have agreed that we, too, are to have a ship of *outside selling*. The most important job we have to do in building our ship is to get close supervision. Whenever we, at Wieboldt's, tried outside selling we always failed until recently because of that one thing—supervision.

"Our department managers were selling managers. They sold goods and received the same commission as did their salesmen. In addition to that they received a small weekly salary to compensate them for the various kinds of bookkeeping which they were required to do and the time off which they were compelled to take to go into the markets with me and to review forthcoming promotional campaigns.

"We now, however, have a program, keeping our department manager setup as it is at the present with this one all-important addition. Each of them will receive an override on the business done by his salesmen."

Better Dollar Earnings

Mr. Parker pointed out that the department store's gun on big commissions will never be quite as big as the corresponding one on the specialty dealer's ship—thinking in turn of *rates* of commission only. In terms of dollars earned, however, he believes that in most instances appliance salesmen will fare better by working for department stores at a smaller commission because of all the other advantages which large stores have.

"For one thing, we have nowhere near the number of salesmen, nor should we have," said Mr. Parker.

"Specifically, I know of an outside selling organization in Chicago which is popularly supposed to have been highly successful and which, as a matter of fact is. During one week sales on their products (which would have an average price of about $60) were only ½ sale per man. One half sale per man per week mind you at 20 per cent commission. That would net only $6. So let's not talk big commission rates—let's talk big commission earnings."

Mr. Parker warned the department store managers not to make the outside selling program too big and too fancy.

"Manufacturers in the last few years have urged outside selling on all of us," he stated. "One of them disapproves of our plans for compensation and supervision at Wieboldt's, and I asked him how much we should pay for sales and supervision expense. His answer was: 'Upwards of 16 per cent. When I demurred, he immediately began to tell the old, old story of department store accounting, and the unfair proration of overhead expense against the appliance department. 'We could pay 16 per cent and more if it weren't for this unfairness.'

"Certainly I believe that a lot of these charges are unfair, and I'm willing to say that my reasons are the same as his, namely, far fewer transactions and much higher unit of sale.

Sales Expense Higher

"As compared with the store's average, must not most of us admit that our sales and supervision expense is *already* much higher?—that our advertising expense is greater?—that it costs us more to warehouse and deliver appliances?—that it costs us more to service our customers?

"Manufacturers tell us, too, of successful specialty-selling operations which have paid 16 per cent or more for sales and supervision. I'll agree that they were undoubtedly successful in sales volume, but how about profit? And who *are* these operators?

"Does the independent dealer make money paying big commissions and bonuses? Well, I wonder. Those many who are bankrupt surely didn't. And if there are any who *do*, remember that they are the dealers who sell personally, with those big commissions and bonuses paid to themselves in a great many instances. Remember, also, that they probably have a big repair and service income.

"There is *one* type of outlet which *does* make money in spite of 16 per cent sales and supervision expense, however. He's the fellow who is both wholesale distributor and retailer—charging his retail expense against a gross profit made available by his distributor's discount. I don't think you'll be surprised to learn that the manufacturer who wants us to pay 16 per cent is one whose wholesale distributor in Chicago also conducts a big retail business.

"No, until we department stores get distributor's discounts, we honestly cannot afford to run an outside selling operation in the grand manner. We'll be doing pretty well if we simply do these things: Follow up all leads, use our users, use our preferred account lists.

"Even to do that, however, requires an outside selling program. We must have a modest one. It requires supervision, and we'll have that. We'll pay as much as we can but it won't amount to anything like 16 per cent."

A PERMANENTLY TIGHT CONNECTION

VIBRATION

Can not loosen it

THE use of STREAMLINE fittings assures permanently tight connections for electric refrigeration and air conditioning work. They are absolutely refrigerant and seep-proof. Vibration cannot work them loose. They form a connection actually stronger than the tubing — yet much lighter and more quickly completed. They reduce your fitting cost approximately 50%.

THE STREAMLINE FITTING IS THE ONLY SOLDER TYPE FITTING ON THE MARKET THAT FURNISHES ITS OWN VISUAL ASSURANCE OF A LEAK-PROOF, PERFECTLY BONDED JOINT WITHOUT AN ACTUAL PRESSURE TEST.

STREAMLINE fittings are space savers. No room is required for wrench handling as is necessary with flared fittings. Lines may be installed close up to each other and connected in a minimum of space. A single straight tube of hard drawn copper connected with STREAMLINE fittings now take the place of multiple lines of parallel small tubes.

STREAMLINE FORGED BRASS FITTINGS ARE FURNISHED IN BOTH O. D. AND NOMINAL SIZES FOR MECHANICAL REFRIGERATION AND AIR CONDITIONING. We manufacture a complete line of forged brass valves and fittings of every type.

SEND FOR CATALOG R-2 AND OUR LATEST PRICE LIST APPLYING TO FORGED AND WROUGHT BRASS STREAMLINE FITTINGS FOR MECHANICAL REFRIGERATION AND AIR CONDITIONING.

Mueller Brass Co.

PORT HURON, MICHIGAN

Stores' Attitude on Appliances Must Be Open, Lutes Declares

NEW YORK CITY — "Department stores will probable assume a role of increasing importance in the distribution of electrical merchandising, but unless the store management is thoroughly sold on the idea and earnestly desires volume in electrical appliances, it would be much better for the store to refuse to attempt the operation of a specialty selling organization," Herschel Lutes, divisional merchandise manager, the J. L. Hudson Co. of Detroit, declared in speaking before the N.R.D.G.A. conventions.

Requirements of Conversion

"If it does consider going into the electrical business it must give heed to the following requirements of conversion:

"1. It must have specialty salesmen and supervisors—not over-the-counter order takers—nor can these be recruited from the regular counter force.

"2. It must assume that the advertising cost will come higher than store total. It must spend more for advertising and more for selling.

"3. It must not go into selling appliances in a timid, half-hearted sort of way by trying to avoid every extra expense or change in policy.

"4. It must be willing to accept all reasonable deferred payment business —not the wild schemes some have tried—but all reasonable ones. It must even go after this deferred business in an aggressive way.

"5. It must agree that solicitation and follow-up of customer inquiries is necessary and good business. It can be done without affecting the dignity or reputation of the store.

"6. Its advertising department must have a friendly attitude and be willing to unbend occasionally. It must advertise terms, perhaps low down-payments, or even feature demonstrations in the home—and many other forbidden and undignified things.

"7. Its credit office must be willing and ready to accept reasonable business and exert itself to aid in getting business. It must not hold back or be too reserved in its attitude toward customers.

"8. Its personnel department must cooperate in finding and keeping men through hard times, and allow good men to overdraw out of season.

"9. It must recognize that neither gross profit nor expense percentages will be the same as in old line departments.

"10. It must have manufacturers' good-will and operate on a high code of ethics in all trade relations—no brow-beating or attitude of superiority, no broken appointments, etc."

Advantages of Department Stores

Department stores have many advantages in the electrical appliance field, Mr. Lutes declared, pointing them out as follows:

Customers are: 1.) More numerous; 2.) More approachable; 3.) Listen with more confidence, and accept sales arguments; 4.) In a friendly buying mood in stores; 5.) Have charge accounts and used to credit business; 6.) Have confidence in a guarantee; 7.) Trust stores for service or adjustments; 8.) Read store advertising regularly; 9.) Stores considered natural source for buying all needs; 10.) Personnel turnover not so great as specialty operators.

"The future holds an unbelievable sales volume for stores in appliances," said the speaker. "We have not even started in securing it. But we also have many limitations; such as:

"1.) Limited service, installation and repair facilities; 2.) Sales technique not effective for specialties; 3.) Drive price bargains too much; 4.) Need new attitude—willingness to depart from tradition; 5.) Each store thinks it is different and has a different class of customers or another set of conditions to meet, or certain individual policies to carry out; 6.) Stores turn down so many propositions daily that they develop a negative mental attitude to suggestions."

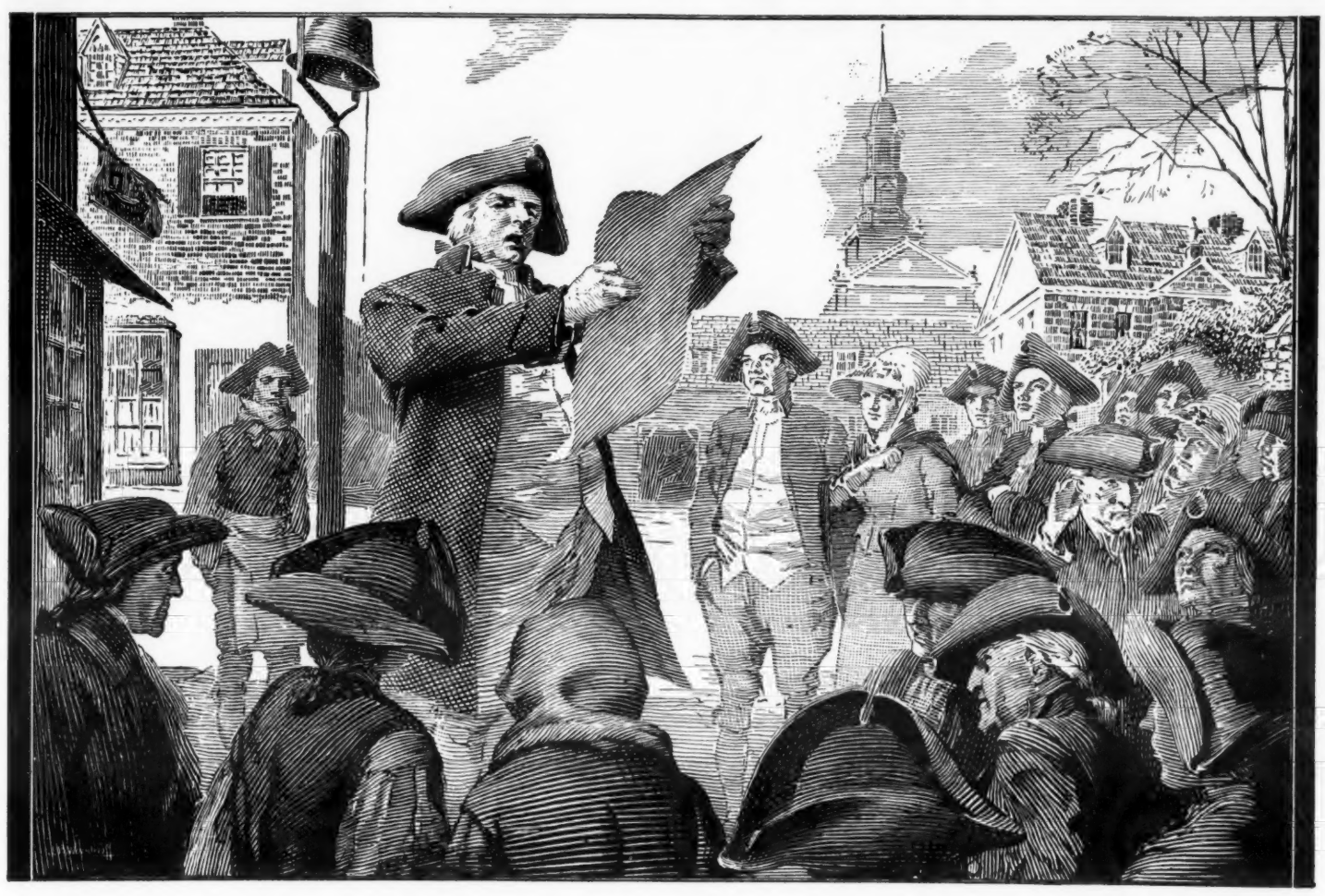
Differences in Operations

According to Mr. Lutes, the fundamental differences in the operation of department stores and specialty selling organizations are that the specialty organization and operator:

1.) Spends more money for publicity; 2.) Spends more for selling commission; 3.) Makes more radical statements in selling and advertising presentation; 4.) Takes more aggressive attitude toward solicitation and high-pressure selling.

"The specialty operator and the stores have each worked out over a period of years what it believes to be the best fundamental principles to work upon," stated Mr. Lutes. "And these are the most effective for each. But they are not alike.

"An admixture of the two plans, resulting from a compromise of two different angles, has been less effective in the past than either one would have been if used in its entirety. But we must continue to develop a third plan that will be effective for department stores."



Hungry for NEWS

New countries—new industries. They alway have been, always will be, news-hungry.

Take the electric refrigeration industry, for example—it's new. So it's in a state of constant flux. Nothing is quite stabilized. New products are being developed continuously. Present products are being altered. Merchandising methods—selling methods—are constantly being tried, revamped, discarded. New suppliers of parts and materials are entering the field. New customers, new markets for refrigeration products are looming on the horizon. The buying and selling personnel of the whole industry varies continually.

Of course the industry is news-hungry. *Of course* it has view-points and thinking quite different from older, more stabilized industries. And naturally it asks for and needs a publication that can represent it sympathetically and reflect it accurately. It wants a publication that will give it the current news, and that discusses new trade developments; analyzes market trends; presents reviews of merchandising and selling successes; sounds danger warnings and offers constructive suggestions. *That is why* ELECTRIC REFRIGERATION NEWS *occupies so unique a position in this field and why it exerts so important an influence upon this trade.*

How influential a factor is the NEWS? Investigate. Ask the key men of the industry their opinion. Question the better distributors and dealers. Ask them where they turn for all news and information pertinent to their industry—and if they follow the "to be read on arrival" injunction which the NEWS carries. Ask them what has first call on their time the day the NEWS reaches their desk and what part the NEWS plays in influencing their thinking and policies.

We are sincere indeed when we recommend ELECTRIC REFRIGERATION NEWS to advertisers who seek to cultivate this field. The influence of the NEWS in the industry is paralleled only by the interest which the industry takes in its advertising pages.

ELECTRIC
REFRIGERATION NEWS
Business News Publishing Co., 5229 Cass Avenue - Detroit

DEPARTMENT STORES

Appliance Makers Must Adjust Promotion Selling Ideas to Fit Dept. Store Setup--Vining

NEW YORK CITY—Electrical appliance manufacturers who seek to gain a fair share of their distribution through department stores face problems which force them to adjust their thinking, promotion, educational measures, and price policies to the nature and traditions of the department store business, V. E. Vining of Westinghouse Electric & Mfg. Co. averred in speaking last Thursday at the annual convention of the National Retail Dry Goods Association.

"A manufacturer who desires to work through department stores faces his first big problem in his own organization," Mr. Vining declared. "This is especially true of the old line manufacturer of major appliances. This manufacturer has been successful in merchandising his product through other channels.

"His nation-wide distribution system is well established and nothing can be done which in any manner will disturb this set-up.

"Even today with the department store a major factor in the sale of electric refrigeration, the total volume sold through this channel is not large enough to permit any successful manufacturer to endanger his other outlets.

"When department store managements, therefore, ask us to do things which actually hurt our chances for continued good distribution through our other established outlets, we are compelled to refuse very definitely, and we are thus accused, many times, of not being willing to work with the department stores along the lines which they consider necessary to their success."

Second major problem is also in the manufacturer's own organization, Mr. Vining believes. Advertising and sales promotion plans, he points out, have for many years been built around either the specialty organization, or the small dealer, or the public utility, or all three, and it comes as a hard blow to the advertising manager of most big concerns to realize that with the department store set-up he must throw aside old established rules and start an entirely new line of thinking.

"The third thing that shocks the national manufacturer as he steps into the department store field is one which smacks of general department store policy; that is, the department store desire constantly to undersell all competition," states Mr. Vining.

"Here is where the department store's inferiority complex unmistakably sticks up its head. It seems strange to an old-line manufacturer, who has been selling through all classes of trade, that the department store with its years of background, its prestige, its assured traffic, its reputation for fair dealings, and its liberal terms needs a better price to sell than an electric dealer around the corner, who operates in a 'hole in the wall' with windows that haven't been redecorated for a month and whose name is utterly unknown, except to a small group of people.

"I am not talking about specials used to stimulate business during off season periods. This practice followed by department stores is, I believe, teaching us all something about merchandising which has not been appreciated in the appliance field in the past.

"I am referring, however, to the constant efforts of the department store to obtain an advantage over all other types of distribution by methods which, while they may not be harmful to a small unknown manufacturer, kept the large manufacturer from approaching the department store for many years.

No Price Advantages

"The major manufacturer dares not give any one classification of business a price advantage. We are embarrassed when department stores have side-tracked our national schedules by creating an artificial price differential through the use of very low finance terms.

"It is rather amusing to some of us, who sit on the side lines hearing the complaints of the dealer during all this battle of terms to hear now the department store complaining bitterly because of dealer finance plans which have been developed to counteract this department store advantage.

"These plans are unsound and unfair, but no more so than some of the finance practices of many major department stores which have made many manufacturers hesitate in entering the department store field.

"The demand on the part of department stores for 'specials' during the height of a busy season is particularly embarrassing to the large manufacturers, especially when it is carried to the extreme of using an advertised brand as a football to sell unknown brands. The usual arguments of the stores using this plan are that they need a cheaper job and that they make a longer profit.

'Footballing' Disappearing

"An analysis of most of these 'drag 'em in' jobs shows, however, that the average net profit is usually less than that on a standard brand when the transaction is completed, and to an old-line manufacturer it seems that a store must need volume very badly indeed when it will risk its reputation over years to come, by gambling on service facilities, operating costs and length of life on some of the bargain jobs that have been put on the market.

"'Footballing' as it is called, is disappearing in the better (not necessarily larger) stores and I think the elimination of this one practice of the department store will, over a period of time, obtain for them a cooperation from the standard old-line manufacturer that will put many dollars in the till."

Mr. Vining believes that the manufacturer who approaches the department store field must perform another major operation on his own sales policies, pointing out that the specialty manufacturer has in the past been both father and mother to his outlets.

"He put them in business, told them how to set up their store, hired men, trained them, told them how to advertise, in fact, dictated every policy," said Mr. Vining. "When we approach the department store, however, it is necessary to forget all of this.

Know Merchandising

"In the first place, the average department store manager who has had any experience at all in major appliances knows more about merchandising *anything* on his floor than we do. We can give him advice from our experience when he asks for it. We can cooperate with him in his plan. We can offer him all the facilities that we have developed for other channels, but God help the manufacturer in the long run who attempts to walk in and tell the department store manager HOW TO DO IT or who attempts to force plans and methods down his throat.

"In the first place, we do not know the answers to your problems even though we are compelled at times to inflate our chests and look like Moses leading his children by the hand. In the second place, we have found out that the average department store man is not one who likes to be sold."

Another necessary change in the manufacturer's viewpoint, observed Mr. Vining, is that he must become reconciled to finding his merchandise on the floor in competition with other brands.

"This is a new experience with most of us because our business has been on the exclusive agency basis," he said.

"Experience is gradually teaching us, however, that carrying more than one line of merchandise, provided it is merchandise of standard price and known quality, is probably helping the industry as a whole. I know specific instances where best results are being obtained through exclusive agencies in the department store field.

"On the other hand, I know many stores that would be foolish to be carrying only one brand and any manufacturer who urges that procedure on them will, in my estimation, place a definite limit on the productiveness of that department. I actually feel that the combined advertising of a number of well-known makes will in most stores build a greater volume than a lone dependence on one brand.

"Another problem is the store that insists on having our exclusive downtown distribution, even though they themselves carry several brands.

"The question is just as long as it is broad, and with the normal number of exceptions, I actually believe a major manufacturer is better off and the store will be of more assistance if the same brands are carried in several downtown stores.

Compromise on Discounts

"The battle between the old-line manufacturer and the department store on the discount question is gradually disappearing. Both of us have compromised. I can remember the time in the refrigerator business when we offered the department store 15 per cent, 'take it or leave it' and it has always been a marvel to me that some of them took it.

"Of course, we were crazy, but no more so than the store which asked for 50 per cent and sometimes 50-10 and showed us a lot of meaningless figures to prove their point.

"It should be borne in mind that no refrigerator has every produced a consistent profit for its manufacturer. We have been working on a close margin and haven't had much to play with. Many stores have, however, on account of their acounting set-up, looked on the refrigerator in terms of furniture, forgetting that with a practical proposition on refrigerators the store caries no stock, has no investment, except that on which it draws interest from the customers, has practically no obsolescence, no service problems and practically no markdown.

Sales Expense Major Item

"There is no need for warehouses full of refrigerators, and there is no need for large floor space. The cost of operating a refrigerator department under modern methods, if you are dealing with a company which will give you the proper set-up, is almost entirely a sales cost and after all, selling is the department store's business.

"The biggest problem which faces any manufacturer attempting to enter that field is education. Our educational system, which has been built up over a period of years, is applicable mainly to exclusive outlets. The department store problem is entirely different. On your floors each manufacturer represented is in competition for your salesman's time and attention with every other manufacturer represented.

"An effort has been made in the last year or two to out-fumble this educational problem through the use of 'spiffs,' contests, and other methods of subsidizing your sales force. This use of 'spiffs' became so universal that smart stores began to wake up to the fact that they were no longer controlling their own sales force. He no longer headed his own department—didn't even work there as far as their own salesmen were concerned."

'Spiffs' Barred by Code

The "spiff" idea, which started out as normal adaptation of the specialty sales contest, Mr. Vining pointed out, degenerated so much that, sanctioned by the code authority, major manufacturers agreed to a standard plan.

"As a manufacturer, my recommendation to you is that whenever any manufacturer or jobber approaches you with any contest program, any 'spiff' program, any lottery or any type of compensation other than the standard promotional fund equaling ½ of 1 per cent of your purchases, you should look that manufacturer or jobber in the eye and say, 'we will be glad to take the money, but we want it in the form of discount so that we can use it in any manner we see fit.' Tell him you pay your salesmen a living wage and they work for you, not for any manufacturer or jobber, and then demand an increased discount," advised the Westinghouse representative.

"You say that I am unreasonable. I am not. Any manufacturer who can afford to give $3 or $10 on a refrigerator as a 'spiff' to your salesmen has that amount figured in his list price or buried in his discount and is merely trying to steal your influence over your own salesmen. It will not hurt him one particle to pay the money direct to you or the offer could not have been made."

Many manufacturers, Mr. Vining declared, before they entered the department store field, have always thought of the term "dumb clerk" as one word, but after they have been working in the department store field, they make the startling discovery that the average manufacturer and jobber's representative couldn't hold a job in your electrical appliance department for three months because he doesn't know enough.

"Consider the problem of the girl on your floor who meets the first customer in the morning—interested in an iron," Mr. Vining said by way of example. "She leads this customer over to a table with six different brands of irons, each brand having four or five models with prices ranging all the way from a $1.65 special to $6.80.

"You and I know this clerk should be able to give the customer intelligent direction and practical advice on the selection of an iron. Yet, is there a house wares manager sitting here, or a manufacturer's representative you ever met who could put on an intelligent demonstration?

"We expect too much from clerks and sales personnel, and because it is impossible for anybody even to approach what is necessary and desirable, we even get less than we expect.

"The department store is, as you know, today only a modest factor in the electrical housewares business, and I personally believe they never will be the major factor until they cut down the number of lines and the number of models shown on the floor to where it is reasonable to expect an intelligent clerk to be able to tell a good story to her customer.

Selling Many Lines

"This is indeed true of refrigeration. Consider, if you will, the problem the salesman faces when his prospect gets off the elevator and looks down among the tomb stones of the best kept cemetery in the world with the 'Maybecold' deceased all planted in one little plot between the 'Lesscold' on one side and the 'Littlecolder' on the other. The woman faces this dazzling array of opportunity to make a wide choice, and the salesman having met her usually asks is there is any particular brand in which she may be especially interested.

"Having shown this brand he finds that her attention wanders to some other make, and he is compelled to start his sales talk all over again, avoiding, if possible, anything used in his first talk.

"By the time he has shown his third brand he is about run out of sales stories, and all he can say is, 'Yes, this is a good one too.' God knows what he says about the sixth, seventh, eighth, and ninth brands. I have stood, many times, on the department store floors and watched the handling of people and the thought that has occurred to me was that if the prospect had a sense of humor, she would use ice the rest of her life.

"Once again, I insist that it is good business to cut the number of brands on your floor to the exact number that an intelligent salesman can present.

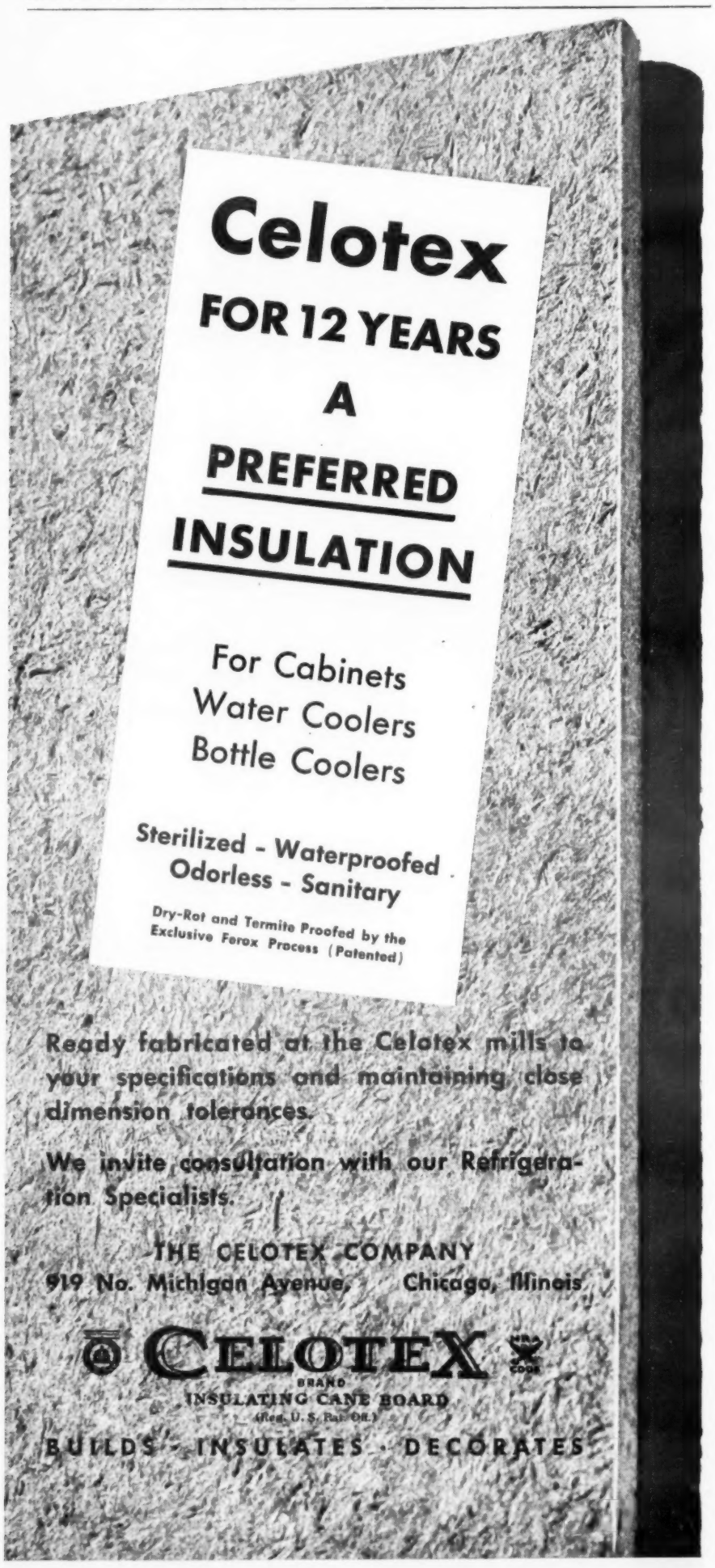
"You realize with me that a new technique of selling is being developed on department store floors. People enter your department in a different frame of mind than they enter one of our exclusive stores. They are more pliable, they have built up no resistance against selling talk.

"I sometimes think that they even like a suave disinterestness during the demonstration. I visit floors where I am absolutely sure that no refrigerator has been sold in the last year, yet the department manager will boast and prove that several hundred of them were delivered and installed."

The customer merely purchased refrigerators, Mr. Vining declared, and the only contribution the salesman made was an order blank and lead pencil. Those stores will always enjoy a nice business, but they will never be a factor in the business as a whole, he stated.

"I am not talking about high pressure. I am talking about good sane closing, good displays and a good sane method of handling prospects. None of those are high-pressured or ungentlemanly or against the policy of any store whose business is merchandising," he concluded.

"This problem of education is a common one, and I believe at last we are together. I know our own refrigerator business through department stores has increased tremendously. It has taken a place in our picture equal to our sales through public utilities."



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Dept. Stores Adopting Specialty Selling to Boost Sales of Appliances, Griffin Says

NEW YORK CITY—Department stores are changing their attitude towards electrical appliances, with many store executives now realizing that specialized methods of selling are required in order to obtain the largest proportion of the potential sales volume, declared Wright Griffin, manager, metropolitan department store division, Rex Cole, Inc. (G-E distributor in New York City) in speaking before the National Retail Dry Goods Association convention here last week.

The growth in importance of department stores in the electric appliance field, Mr. Griffin said, is indicated by the fact that in 1931 they were responsible for less than 12 per cent of the total manufacturers' sales to all retail outlets, while in 1934 it is estimated they were responsible for 22 per cent of this business.

Evolution of Merchandising

Mr. Griffin pointed out that the evolution of merchandising a new major electric appliance has usually divided itself roughly into three periods:

FIRST — *The Educational Period* during which great selling efforts are made by manufacturers in introducing the product. Such a period is characterized by spectacular sales promotions—skepticism on the part of the buying public—slow accretion of consumer demand—necessity for strenuous selling effort—excessive marketing costs.

SECOND—*The Transitional Period* characterized by greater public acceptance. Larger and better financed manufacturers enter the field, attracting with them more capable merchants to sell the product—better distribution follows—recognition by the public of the economy as well as the convenience of the product.

THIRD—*The Merchandising Period* characterized by large volume sales, widespread public demand and acceptance as more and more people come to consider the product as a necessity rather than a luxury, prospective purchasers asking for products by brand name, and lowered marketing costs and prices.

From a merchandising standpoint, a product, during the first period, is one that interests a retail store principally for its future possibilities, Mr. Griffin stated. During the second period, the retail store becomes more interested and perhaps places some of the products on display and experiments with selling them by conventional department store "over the counter" methods with meager results and large expense.

Dept. Store Natural Outlet

However, as public demand and acceptance increase through the specialty selling efforts of manufacturers and their distributors, the department store rapidly begins to assume an increasingly important position in the merchandising of such products.

A department store is a natural avenue for the purchase of electric home equipment, the speaker asserted. Fully 30 per cent of the average family's expenditure is made for merchandise to be found in the department store, he stated.

"Since 1929, most department stores have pared their operating and administrative overhead to an irreducible minimum," said Mr. Griffin. "Thus, added volume—increased sales per square foot—has become a necessity to reflect a profit on the annual operating report.

Growing Public Demand

"Major electric appliances offer a growing opportunity for additional volume sales. They now enjoy an increasingly active public demand and acceptance. People want electric appliances in order to get more leisure and better living.

"Eighty per cent of the large department stores have added various departments since 1929 as an obvious method of bidding for additional business. It is a significant fact that more than 55 per cent of these new departments are in electric appliances.

"Because these appliances relate to a department of the home with which men are perhaps least familiar, they are not prone to agree to assume the comparatively large financial obligation involved in their purchase unless they are expertly shown the labor saving, safety, convenience, and economy features of modern electric home equipment by salesmen trained in this work.

"Decisions to buy are made largely in family conferences, as indicated by the fact that stores employing specialty selling methods say that as much as 40 per cent of their business in major appliances is closed outside the store.

"To result in volume, the actual, successful selling of electric appliances, therefore, must be in the hands of sales people specially trained and with the proper background of education, experience, and ability to interpret the advantages of such equipment of the prospective purchaser."

Specialty selling, as it is practiced in department stores today, does not mean indiscriminate house-to-house canvassing, Mr. Griffin believes, but it does mean solicitation of leads obtained from floor traffic, cooking schools, demonstrations, lectures, and other department activities, and store charge customers by means of aggressive, expert salesmanship in a manner compatible with department store policy.

In order to get volume in the face of competition, many stores now realize it is necessary for them to resort to many of the specialty methods which have been employed by factory branches, distributors, public utilities and others in selling this line of merchandise in volume, and they have found this can be done without detracting from the dignity or reputation of the store, the speaker averred.

This applies as well to financing. If a store's customers cannot buy from it on as advantageous (to them) terms, as they can from competition, competition will get the business.

Dollar Volume Per Sale High

"Many retail stores consider the gross profit percent in electric appliances small—perhaps it is, but the *dollars* of gross profit per sale is large and the expenses involved are small, thus the net profit result is on a basis comparable with the total store picture," Mr. Griffin pointed out.

"Distributors of major appliances who sell to retail stores generally carry the stock, deliver, install, and service their equipment. Many share in advertising and sales promotion expenditure and perform other services.

"The administrative, financial, merchandising, and advertising management of many stores have become reconciled to the idea that electric appliances as specialties require specialized treatment to conduct this business successfully. They realize that full and enthusiastic cooperation of the various functional operations of the store is essential to its success.

"Stores in which this is lacking, and stores which insist upon applying conventional 'dry goods' methods to appliance merchandising, have either given up the major appliance business entirely or have accepted a meager, expensive, and unsatisfactory volume of business."

Methods of Operating Department

According to the Rex Cole executive, there are two methods of operating which have been accepted by stores having successful major appliance departments.

The first is one under which the store adopts major appliances as a separate department, builds its own organization, consisting of a manager (buyer) experienced in specialty appliance selling and in retail store procedure, a sales supervisor and salesmen, and allows it to operate under the store system but with special privileges and limitations insofar as usual department control is concerned.

The second accepted method is to allow a manufacturer, represented by a local distributor, to operate the department under a "resale" arrangement, whereby the store is relieved of most, if not all of the expense.

Under this plan, the operators supply a carefully selected, well trained sales organization, usually spend more money for publicity and selling commission, and often assume a more aggressive attitude towards conducting the department than the store would be apt to do in operating its own section.

80% Selling, 20% Buying

"It has been said that the relative importance of the merchandising functions to a store's profit is about 80 per cent buying and 20 per cent selling," Mr. Griffin stated.

"This may be true in conventional merchandise departments; however, in major electric appliances this proportion is just the other way 'round.

"To the average customer the purchase of a major electric appliance is usually considered as an investment in a permanent piece of home equipment, and they expect it to render satisfactory service for many years.

Thus to safeguard their principle asset—customer goodwill—stores successfully operating major appliance departments have found their choice of nationally advertised brands adequate insurance for continued customer satisfaction."

Seeger

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The Los Angeles Branch (illustrated above) of the Seeger Refrigerator Company at 655-57 South LaBrea, with an efficient staff, devotes its every resource in rendering assistance to Dealers and Distributors of Electric Refrigeration.

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DEPARTMENT STORES

N.R.D.G.A. Endorses Program of Social Legislation

(Concluded from Page 1, Column 4)

Detroit, such well known figures of the electric refrigeration industry as Ralph Cameron of General Electric, V. E. Vining of Westinghouse, V. J. McIntyre of Kelvinator, C. M. Armstrong of ReDisCo, P. A. Ames of General Motors Acceptance Corp., S. D. Maddock of C.I.T. Corp., and Wright Griffin of Rex Cole, Inc., appeared before the assembly and discussed financing, discounts, outside selling, and various phases of specialty salesmanship.

These talks are reported in detail on pages 4, 5, 6, 7, and 9 of this issue.

David Ovens, first southerner to occupy the presidency of the National Retail Dry Goods Association, was re-elected to that office for his second term by the board of directors of the association.

Mr. Ovens is vice president and general manager of J. B. Ivey & Co., Charlotte, N. C., president of the North Carolina Retail Merchants' Association, and a member of the National Retail Code Authority.

At the same time five vice presidents were named to represent five sections of the country on the board of directors of the association. The vice presidents are as follows:

F. W. Aldred, president, Gladding's, Inc., Providence, R. I., for New England; John C. Watson, president, John G. Myers Co., Albany, N. Y., for the Middle Atlantic States; Frank H. Neely, Rich's, Inc., Atlanta, Ga., for the South; Leon Mandel, Mandel Bros., Chicago, Ill., for the Middle West; and Tom May of the May Co., Los Angeles, Calif., for the West. Mr. May and Mr. Neely were re-elected as vice presidents.

New Directors Named

New directors elected to the board are: John C. Watson, John G. Myers Co., Albany, N. Y.; Norman Wallace, Forbes & Wallace, Springfield, Mass.; Arthur Kramer, A. Harris & Co., Dallas, Tex.; J. L. Paine, Spokane Dry Goods Co., Spokane, Wash.; Joseph Spiess, Joseph Spiess Co., Elgin, Ill.; Jay Iglauer, The Halle Bros. Co., Cleveland, Ohio; and James S. Schoff, L. Bamberger & Co., Newark, N. J. R. W. Costello, O'Connor, Moffatt & Co., San Francisco, Calif., has been re-elected to the board as a director.

Setting a new precedent, the board voted to hold a mid-year convention of the association, with participation by all divisions, in Chicago in May or June.

This convention will include, besides meetings of the sales promotion and merchandising divisions of the association, also the concurrent occasions of the controllers' congress and management groups of the association, which are customarily held in June.

Irwin D. Wolf, secretary-treasurer, Kaufman Department Stores, Inc., Pittsburgh, was elected by the board to represent the association as a member of the National Retail Code Authority. He succeeds Wm. H. Hager, Hager & Bro., Lancaster, Pa., whose term expired.

Also representing the association will be Mr. Ovens, who continues in this office, with Channing E. Sweitzer, managing director of the association, serving as alternate.

Mr. Sweitzer was re-elected managing director.

Warning that NRA codes are tending to develop monopolies through limitation of production, price-fixing, and other provisions, Dr. Paul H. Nystrom, professor of marketing at Columbia University, appealed to the National Retail Dry Goods Association to fight every move through the NRA or any other government branch to guarantee security of profits.

Appeals to Business Men

Dr. Nystrom addressed his appeal to all business men, asserting that they should not look to monopolies but to efficient management for their profits.

His appeal carried additional weight by virtue of his services as vice chairman of the National Retail Code Authority and president of the Limited Price Variety Stores Association.

Speakers at the general luncheon discussion on Federal relief and the national housing program asked the retailers to back the association's social security program, including unemployment insurance, and the restoration of 20,000,000 persons now on subsistence to a consuming basis.

Dr. Nystrom asserted that the first and surest way to make profit was by having a monopoly, adding:

"Except where limited monopoly contributes to progress and advancement, as in the cases for which patents and copyrights are granted, the public properly distrusts all forms of monopoly.

"The public fears and hates monopoly. Every effort on the part of business men to combine to fix prices at any point is a step toward monopoly and is certain to be followed by public reaction.

"This is the logic that faces the price-fixing provisions in the NRA codes in Washington today. Yet this is the logic which the code-makers have apparently failed to see.

Retailers First to Suffer

"Since retailers stand closest to the consuming public, they are the first to feel the impact of public opposition to arbitrary prices. Indeed, retailers must even bear the brunt of consumer ill will.

"It is to the interest of the retailers then, not only to oppose price-fixing and other steps toward monopoly among themselves, but also to oppose all such measures among their sources of supply as well.

"There can be no more false and misleading statements than that 'every retailer or producer is entitled to a profit.' Society does not owe any one, much less should it guarantee to any one, a profit. Profits must be won by efficient management."

Albert D. Hutzler, president of Hutzler Bros. Co., Baltimore, addressing an evening session, said:

"Capital is more easily available for financing a prosperous business than it has been for a few years.

"However, I believe that there will be more balance sheets showing excess liquidity than showing lack of working capital. Decreasing sales volumes necessitated salary cuts. Then came the NRA, which necessitated large increases.

"Since that time, business has recovered enough to justify stores reviewing their payrolls with an eye to advancing those who merit it because of superior performance."

Amos Parrish of Amos Parrish & Co., advertising, New York, estimated that the 5,500 stores represented by the association spent annually $200,000,000 for publicity.

He urged the retailers to dramatize their products throughout the year, asserting that the average store did so only at Christmas time.

Mr. Parrish said goods should be dramatized throughout the spring months, especially at Easter.

Ward M. Canaday, president of the United States Advertising Corp., and director of public relations of the Federal Housing Administration, speaking at the luncheon, said 16,000,000 of the country's 29,000,000 buildings were in need of repair and that the total of normal repairs uncompleted since 1929 amounted to nearly $15,000,000,000.

Explaining FHA Program

He asserted that if only $100 were spent immediately on each building needing repair it would mean $1,500,000,000, which is just 50 per cent more than the total spent for the CWA program a year ago, which served as an immediate stimulus to retailing.

"The President has just announced a program involving subsistence homesteads, farm homes, and slum clearance," Mr. Canaday continued.

Saul Cohn, executive vice president of the City Stores Co., New York City, and chairman of the association's committee on national housing, said:

"The retailer must give careful thought to procuring an extension of the base of those items which can be sold under modernization so that, on the one hand, the logical purpose of the law will not be defeated, and, on the other hand, he will be given some motive based upon his self-interest which will prompt him to support the movement.

"The thing to be considered is whether the establishment by the retailer of his own lending agency will not work out to better advantage."

Edgar J. Kaufman, president of the Kaufman Deyartment Stores, Inc., Pittsburgh, and chairman of the association's committee on Federal relief, referring to the security program unanimously endorsed by the association, said it meant "no more moving 20,000,000 people an inch nearer to, or a foot farther from, the edge of starvation.

"The plan," he continued, "does not consider how to keep these 20,000,000 people alive, but how to make them do their part as consumers in a sound business economy.

"No Permanent Unemployed Class"

"The President has been praised, and rightly, for saying that he will not assume the existence of a permanent unemployed class in the United States. The way to make sure of this is to see that there is no class permanently unable to consume what this country is permanently able to produce."

In an address before the merchandise managers' division, R. H. Edwards, merchandise manager of the Jordan Marsh Co., Boston, said 1933 had been "the last big year of the flood of 'something for nothing,'" adding: "We could say that 1934 was a year of changed outlook and a year of tearing away from the mad rush of price.

"That brings us to 1935 and the future. I believe that there is one keynote which should be struck for this new year and that is: Create a desire in the minds of the consumers to possess an article for some other reason than price."

The merchandising division of the association elected Neal D. Mooers, general merchandise manager and vice president of Abraham & Straus, as its chairman. Other officers elected by the board of directors of the division were:

First vice chairman, Richard G. Roth, vice president, Wm. Taylor Son & Co., Cleveland. Second vice chairman, J. Sylvan Kaufman, vice president Mandel Bros., Chicago. Secretary-treasurer, Benjamin M. Weiss, general merchandise manager Dey Brothers & Co., Syracuse, N. Y.

The division elected the following to its board of directors: F. W. Aldred, president, Gladding's, Inc., Providence, R. I.; C. B. Dulcan, general merchandise manager and vice president, The Hecht Co., Washington, D. C.; G. E. Fargo, general merchandise manager, Broadway Department Store, Los Angeles; J. Sylvan Kaufman, vice president, Mandel Bros., Chicago; H. Lutes, divisional merchandise manager, J. L. Hudson Co., Detroit; A. H. McAllister, general merchandise manager, H. M. Voorhees & Bro., Trenton, N. J.; Frank Mayfield, president, Scruggs-Vandervoort-Barney Dry Goods Co., St. Louis; Sidney Reisman, general merchandise manager, Bloomingdale's, New York City.

S. Klein, famous low-price dress merchandiser of New York City, disclosed to the National Retail Dry Goods Association some of the maxims which have brought into his store not only the strictly budgeted housewife, but society leaders as well.

"No matter what the size of a woman's income she feels she must be fashionably dressed, for I have learned from my own experience that its a very true saying that 'the Colonel's Lady and Judy O'Grady are alike under the skin' when it comes to clothes.

Desire Smart Appearance

"They all want to make a smart appearance, and they all enjoy a bargain. And it does not make any difference as to their age—from 7 to 70, and possibly to 90—all very naturally and very rightly consider their appearance of first importance."

Other maxims of the S. Klein store are:

"Have what the customer wants, and do not try to sell him or her something they don't want."

"It is, of course, a woman's privilege to change her mind."

"Never put dresses for stout ladies on an upper floor—they do not wish to climb stairs."

Charging that the NRA had created a system of industrial government which had developed "725 little principalities of business," Walter Rothschild, vice president of Abraham & Straus and chairman of the Retailers' Protective Committee, presented a resolution calling upon Congress and the NRA to eliminate immediately from all codes such provisions as were not contributing to recovery.

"More than half of these new instruments of trade control," Mr. Rothschild said, "have sought their own ends under the guise of carrying out the purpose of the NRA."

In his address to the convention, Mr. Rothschild asserted that the National Retail Dry Goods Association must remove from the NRA codes the obstacles to the increased reemployment and enlarged buying power.

He declared that price-fixing devices tended to slow production, retard distribution, and generally defeat the basic purposes of the NRA.

"We shall continue to urge," Mr. Rothschild concluded, "the mandatory elimination from codes of those devices which have as their objective price fixing for a profit, whether that be a maintained resale price, a stabilized industry price, or any form of the control of the marketing conditions that effect the prices and terms on which merchandise is bought."

Resolution on Price Fixing

The resolution, as presented to the assembled delegates at the Hotel Pennsylvania, asked that in any new legislation or revision or continuance of the NRA there be embodied a mandatory provision eliminating from all codes such provisions as lead to price fixing directly or indirectly through the following devices: Any and all price listing plans, the allocation and limitation of production, the fixing of resale prices.

The resolution also asked that the retail code's fair trade practices on advertising be amended so as to eliminate the word "inaccurately" from Article IX, Section 1 (c) so that it will then read as follows:

"No retailer shall use advertising which lays claim to a policy of continuing practice of generally underselling competitors."

Irwin D. Wolf, secretary to the Kaufman Department Stores, Inc., Pittsburgh, urged the convention to organize a series of forums for the intelligent discussion for a better understanding of the importance of the provisions finally approved for incorporation in a code purely for local guidance.

Immediately after going on record in favor of a program of economic security including unemployment insurance and old age pensions, the convention heard further discussion of the sales tax.

The speaker was Ira A. Hirschmann, advertising director of Lord & Taylor, who declared the tax here had been "slipped over" on New York merchants and the public by politicians.

He attacked the contention the sales tax was the last resort to solve the problem of relief funds, and warned of the danger of this style of taxation spreading over the country.

Against Federal Sales Tax

While opposed to a general Federal sales tax, he said it would be more equitable than any other type if it would absorb state and municipal levies.

Mr. Hirschmann declared that it was up to the merchant to interest himself in public affairs, and that this was the big job of the publicity director who was able to gain information through his contact with newspapers.

The economic security program was adopted after the plan had been submitted by a committee headed by Percy S. Straus, president, R. H. Macy & Co. The association endorsed it.

The program went even beyond that recently suggested by the Administration and recommended pensions for those now incapacitated by old age, old age insurance for the future, provisions for sickness, and disability and widows' pensions.

Both employers and employees are to contribute to unemployment reserves, according to the plan.

Mr. Straus in an address lauded the program and urged its adoption, declaring this would make the association the first business group to take this action.

Security Program Praised

He was supported by Samuel W. Reyburn, president, Associated Dry Goods Co. and chairman of the association's committee on unemployment reserves, and Edgar J. Kaufman, head of the Kaufman Department Stores, Inc., Pittsburgh.

The distribution system has fallen down and failed to reduce the cost of getting goods from the factory to the consumer, R. G. Parker, assistant sales director and advertising manager of W. T. Grant Co., declared.

A New Water Control Valve

REPRESENTATIVES

A. A. Anderson
325 Union Building
Cleveland, Ohio

Carman Adams, Inc.
2970 West Grand Blvd.
Detroit, Michigan

William M. Orr Company
1228 Brighton Road
Pittsburgh, Pa.

Preferred Utilities Mfg. Corp.
33 West 60th Street
New York City

Controller Sales Co.
9 South Clinton Street
Chicago, Illinois

Campbell-Elsey-Fagergren
412 Ness Building
Salt Lake City, Utah

The Kowfeldt Co.
529 Seventh St., South
Minneapolis, Minnesota

Harrison Sales Co.
314 Ninth Avenue, North
Seattle, Washington

D. O. Eggert Co.
3615 Laclede Avenue
St. Louis, Missouri

H. W. Nussbaum
438 E. Huisache St.
San Antonio, Texas

R-O Distributors, Inc.
775 Main Street
Buffalo, New York

S. E. Talbot
912 E. 3rd Street
Los Angeles, Cal.

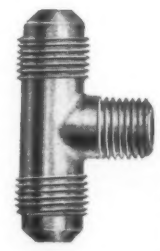
Export Department
15 Laight Street
New York City, U.S.A.

The Model 66 water valve is primarily designed for air conditioning and commercial refrigeration work. It has a small by-pass operated by a solenoid. The by-pass allows the pressure of the water to actuate a diaphragm which in turn opens the main valve seat. Power consumption therefore is very low. Operation is fast and simple. Bulletin 406 illustrates and describes the valve in detail. Send for your copy today.

AUTOMATIC PRODUCTS CO.
121 N. Broadway Milwaukee, Wis.

VARIETY

An endless variety of fittings for refrigeration purposes are available at all times from Commonwealth Brass Corporation.



Standard Fittings, Unions, Elbows, Tees, Connectors, Crosses, Plugs, Sealing Caps, Strainers and every other conventional fitting are shipped immediately from stock.

Semi-Standard types, varying in some particulars from standard forms, are carried in hundreds of combinations of pipe and tube ends.

Specials for any purpose made promptly from hot forgings or extruded rod.

Each and every fitting is Seepage Proof; 100% Inspected; and protected from abuse in shipping.

COMMONWEALTH BRASS CORPORATION
Commonwealth Ave. at G. T. R. R.
DETROIT, MICHIGAN

Finance Men Express Different Ideas on 'Winter Selling Plan'

NEW YORK CITY—The "winter selling plan"—under which electric refrigerators are sold with a minimum down payment and the monthly payments deferred until spring and spread out over a long period—received two knocks and a boost at the 24th annual N.R.D.G.A. convention here last week.

Favoring the plan was C. M. Armstrong, vice president of the Refrigeration Discount Corp., Kelvinator Corp.'s finance organization, while opposed were P. A. Ames, General Motors Acceptance Corp., and Edgar L. Amthor, director of accounts for L. Bamberger & Co., Newark, department store.

ReDisCo, in four years' experience with the winter selling plan, has experienced most satisfactory results, Mr. Armstrong stated.

Repossessions Not Disturbing

"Repossessions have at no time been a disturbing factor," he said. "As a matter of fact, on all paper that we have purchased since the beginning of our operation, so far as we can determine, repossessions have amounted to slightly less than 1 per cent of the units sold, on which the sales have been financed by us."

Both Mr. Ames and Mr. Amthor, however, were of the opinion that the plan was full of pitfalls, and that sooner or later organizations following it would come to grief, because it was not founded on good business or credit principles.

While admitting that GMAC's percentage of delinquencies and repossessions for 1934 was nearer normal than in any of the four preceeding years, Mr. Ames thought that "it is better to be just a little bit more careful about the credits that are extended and the types of plans that are introduced.

"As times become better," he said, "purchasers are much more apt to over-extend themselves. Contrarily, during days of uncertainty, they are more wary of making commitments."

Opposed to Selling Plan

Mr. Amthor, speaking for the credit managers, said that as a class they were generally opposed to the winter sales idea.

"Credit managers know, by painful experience," he stated, "that the desire to make a sale must be subordinated to the possibility of making a profit. They know that where the customer does not have a real equity in merchandise sold on the deferred payment plan, or where the period of payment is extended beyond the bounds of prudence, such transactions are speculative in character and do not belong to the field of good business.

Vicious and Demoralizing

"All over the country merchants and credit managers are taking a positive stand in condemning this species of high-pressure salesmanship known as the 'winter plan' for selling electric refrigerators. That it is vicious and demoralizing in its effects are evident from the recent article in *Women's Wear* referring to competition of terms in St. Louis.

"One store offered to sell electric refrigerators with a down payment of 5 per cent. Another store then offered to sell with the same down payment and no further payment until March. The first store then met the terms of the second. Both should be severely condemned, for such cutthroat competition in terms means they are both being exploited by the manufacturer, with no profit to themselves. This is not our idea of good business."

Mr. Armstrong, while admitting the purchaser's equity was light under the winter selling plan, nevertheless considered it both desirable and good business.

Paying Performance Better

"The purchaser of an electric refrigerator bought on the winter plan will be less apt to return or have his refrigerator taken from him, as the summer months approach, than would be the case of a purchaser who had used his electric refrigerator during the summer months, and as winter approached found the necessity to be not as great," he said.

"So far as what is styled as 'long terms', our records show the paying performance of long-term paper has been more satisfactory than the original plan of 18 months or shorter term paper."

ReDisCo has changed its winter plan this year only to the extent that instead of requiring a down payment of 10 per cent and no further payments until March, a small monthly payment is required, the first to be paid when the contract is signed, and then a similar amount each month, with regular equal monthly instalments starting April 1, these payments to be extended over a period of as long as 24 months.

"The answer to this change is," said Mr. Armstrong, "that notwithstanding the satisfactory experience we have had, we felt that the plan now in effect was sounder, as inasmuch as it did not inflict a hardship upon the purchaser, it is, we feel, an attractive and appealing a plan. It accomplishes the thing that we feel is desirable, and that is, it gets the purchaser trained and in the habit of making systematic monthly payments.

"From a purchaser equity standpoint, at the time the purchaser starts to make regular instalment payments in equal monthly amounts, he has invested not a great deal more than the 10 per cent down payment requirement, as called for in our previous winter selling plans. That really is the only reason we felt it desirable and good business to make this change in the plan."

The speaker cited figures to show that while the over-60-day delinquent instalments on the amount of paper carried were .35 of 1 per cent in 1927, and the average length of the contracts handled 14.16 months, 1934 statistics showed a delinquency of only .11 of 1 per cent, with an average contract length of 21.70 months.

"The closer you get to the purchasers' ice bill," he said, "the more satisfactory paying performance will be experienced."

Need Sufficient Investment

Mr. Ames' experience with instalment selling, he said, had given him the following as fundamental principles:

1. The purchaser should have sufficient investment so that it would be cheaper for him to pay than to turn the product back.

2. The rate of payment should be such that upon repossession the resale price exceeds the unpaid balance; or, in other words, payment should exceed depreciation.

Admitting it was easier to list rules than to follow them, he said:

"In considering the wisdom of any plan, the test of investment by purchaser can certainly be applied. The extent to which deviation is made can then be determined by experience and business judgment.

Reasons for Disliking Plan

"Our dislike of the generally used winter plan has been:

"1. The almost negligible down payment.

"2. Extended terms.

"3. Encouraging salesmen to be dishonest.

"While this and other extremely liberal plans may prove to be good temporary sales expedients, it seems to us that far too much emphasis is placed upon low down payments and long terms, in time sales of electric refrigerators. Much better would be the stressing of quality and features of the product as a means of producing sales, instead of engaging in a battle of down payments and terms.

"After considering the higher cost of repossessing, the cost of reconditioning and reselling, together with a relatively poor used refrigerator market, you have a depreciation that certainly exceeds the average rate of payment. It would appear that the industry would be wise in strengthening, to whatever extent possible, its position on time selling."

Copper & Brass Research Association Reorganizes

NEW YORK CITY—At a reorganization meeting of the Copper and Brass Research Association held here recently, mining company members withdrew and fabricating members made plans for this year's promotional campaign.

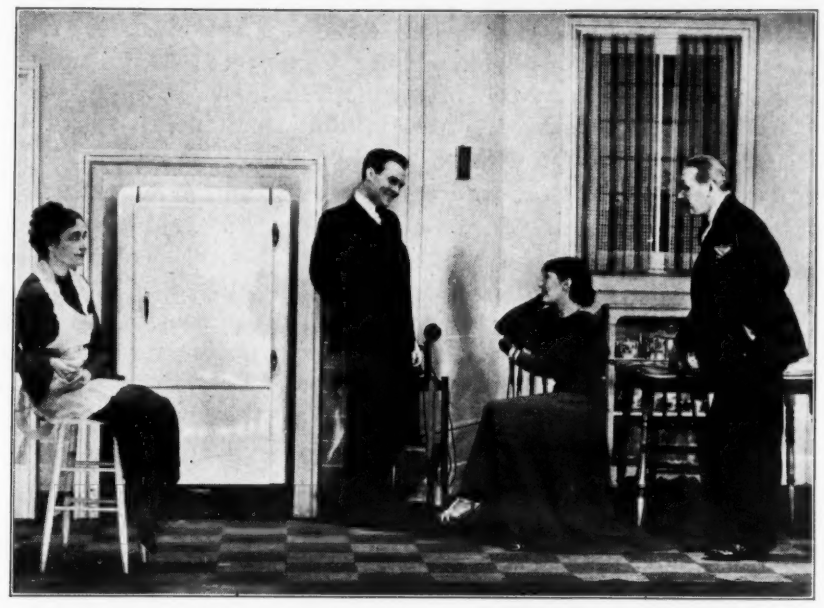
F. S. Chase, president, Chase Brass & Copper Co., was elected president of the association. Vice presidents are: John A. Coe, president, American Brass Co.; C. D. Dallas, president, Revere Copper & Brass, Inc.; and Wylie Brown, president, Phelps Dodge Copper Products Corp., C. T. Ulrich, vice president and treasurer, Kennecott Copper Corp. was elected treasurer and B. B. Cadle, secretary of the organization.

Members of the operating committee are J. A. Doucett, Revere Copper & Brass, Inc.; R. L. Coe, Chase Brass & Copper Co.; John A. Coe, Jr., American Brass Co.; Herman W. Steinkraus, Bridgeport Brass Co.; and W. M. Goss, Scovill Mfg. Co.

Georgia Power Range & Refrigerator Sales Up

ATLANTA—Increase in electric refrigerator and range sales for 1934 over 1933 was reported recently by Georgia Power Co. of this city. A survey made during 11 months of 1934 as compared with the same 11 months of 1933 showed an increase of 6,245 units in electric refrigerator sales and 2,705 in range sales. The 1935 quota established by the power company for refrigerators is 9,000 units and for ranges—4,900 units.

'The Freedom of the Shes'



Norge distributors and dealers in 57 cities will see this scene from "The Freedom of the Shes" presented by Broadway stars. Two troupes are on tour. In the picture are, left to right: Allyn Gillyn, Philip Brandon, Harriet Livingstone, and Albert Bergh.

Crosley Branch Reports 287% Gain in Orders

CHICAGO—Orders from dealers increased 287 per cent over last year at the meeting of Crosley dealers held at the Medinah Athletic Club here by the Crosley Distributing Co. of Chicago, C. S. Tay, manager, reported.

The meeting was held at the club because the distributing company was in the process of remodelling.

Rochester Co. Makes New Thermometer

ROCHESTER, N. Y. — Rochester Mfg. Co., Inc. of this city has brought out a new refrigerator thermometer to sell for 35 cents. It hangs from any shelf in the refrigerator and enables the user to see if the refrigerator is too warm or too cold for proper food preservation. The case is enameled in white with chromium trim.

Norge Play Given at Dealer Meetings

DETROIT — Making a tour of 57 cities is the comedy, "The Freedom of the Shes," a play written to show Norge dealers the public reaction to the right sort of advertising and presentation argument of Norge products.

Two casts of Broadway stars are making the tour. The first troupe, under the direction of John H. Knapp, vice president in charge of sales, is travelling south and east; the second, under James A. Sterling, author of the play, and Norge advertising and merchandising manager, is traveling south and to the west coast.

Theme of the comedy is the revolution in home life brought about by the convenience, savings, and leisure afforded by refrigeration, washers, oil burners, and kitchen ranges. The play demonstrates the reaction of members of a typical household to advertising, appearance of a dealer's windows, and presentation appeals.

Distributors are responsible for "getting out" an audience in each city.

Cities in which "The Freedom of the Shes" will be presented are as follows:

Detroit, Indianapolis, Louisville, Nashville, Memphis, Little Rock, Jackson, New Orleans, Houston, San Antonio, Dallas, Oklahoma City, Wichita, El Paso, Tucson, Phoenix, San Diego, Los Angeles, Fresno, Sacramento, San Francisco, Portland, Seattle, Spokane, Billings, Salt Lake City, Denver, Omaha, Waterloo, Milwaukee, Chicago, St. Louis, Kansas City, Birmingham, Atlanta, Jacksonville, Tampa, Miami, Charlotte, Richmond, Washington, D. C., Baltimore, Philadelphia, Newark, New York, Providence, Boston, Springfield, Albany, Syracuse, Rochester, Buffalo, Cleveland, Pittsburgh, Charleston, Cincinnati, Des Moines, Minneapolis, St. Paul.

"MORE AND MORE ADVERTISING"
"PLANS FOR EVERY MONTH OF 1935"
"MORE DEALER SHOWS"
"ATTENTION CENTERED ON MY STORE"
"1935 IS IN THE BAG"
"12 SPARKLING NEW MODELS"
"MORE PROSPECTS GUARANTEED"

NO WONDER *Leonard Dealers Smile*

LEONARD dealers can well afford a broad smile of satisfaction whether they think of the swell 1934 job behind them or the rosy prospects for 1935. They know that the Leonard Franchise is worth real money to them—because they know that Leonard came through 100% on its promise to deliver prospects right into their stores.

That promise has been renewed for 1935. Leonard greets the new year with a refined line (12 models of the *complete* refrigerator) that ranges in price to meet every income and that absolutely answers the demands of 98% of refrigeration buyers. One line that has *everything!*

Prospects are coming the Leonard dealer's way—and prospects mean sales and profits. Leonard plans for 1935 cover every month like a blanket with aggressive, hard-hitting, proved promotions that *pull.* Leonard is all set to get behind the dealer in a bigger way than ever. A dealer couldn't get more backing.

Leonard knows your problems—and, what is more, Leonard cares about them. If you want sled-length cooperation in making refrigeration sales, hook up with Leonard for 1935. Your store will hum with activity.

Remember this—Leonard public acceptance is definitely on the increase—when you handle Leonard you handle what the people want. We have the proof—it's up to you to cash in on it.

A Leonard Franchise is something to crow about. Wire or write. . . . LEONARD REFRIGERATOR COMPANY, *14256 Plymouth Road, Detroit, Michigan, and London, Ontario, Canada.* (734)

LEONARD

THE *COMPLETE* REFRIGERATOR

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Department Stores See the Light

RALPH CAMERON, department store sales manager for General Electric, told merchandise managers of the nation's leading department stores last week (at the annual convention of the National Retail Dry Goods Association in New York City) that "the electric appliance business is the only one which has shown a steadily rising curve for the last 50 years."

That statement struck the department store men present as having profound significance. It coincided, too, with a train of thought which has been coursing through the minds of the better thinkers among them for the last several months; viz., that the electrical appliance business is something on which they can *make good money*. To much previous department store thinking—whether admitted publicly or not—has tended toward the view that appliances were chiefly valuable "leader" items; i.e., merchandise which could be advertised at cut prices to draw buyers into the store.

Department Stores Textile-Minded

It is not without reason that the big department store body is called the National Retail *Dry Goods* Association. As Herschel Lutes, progressive divisional merchandise manager of the J. L. Hudson Co. of Detroit (Mr. Lutes was chairman of the electrical sessions at the N.R.D.G.A. convention) remarked recently: "Department stores are about 6 per cent electrical-minded and about 94 per cent textiles-minded."

Figures—always important to the big retailer—are proving to be highly enlightening, however. When G-E's Mr. Cameron declares that "there are some 22 millions of wired homes in this country; each of these homes spent $25 for electrical appliances last year, of which $12.50 was for an electric refrigerator," department store executives sit up and take heed.

Cold Figures Warm Up Executives

They are further impressed by such statistics as these (quoted by Mr. Cameron), which show how many dollars worth of household electric refrigerators department stores in certain cities sold last year, what percentage of the total sales in those cities was obtained by department stores in that time, and what their expectancy of business (both dollar volume and per cent total) is for 1935.

	1934 amount of business done on refrigerators	Estimated dept. store percentage of sales 1934	Estimated 1935 refrigerator business	Estimated dept. store percentage of sales 1935
Portland	$1,000,000	25%	$1,300,000	30%
Philadelphia .	8,000,000	12½%	8,000,000	12½%
Los Angeles .	3,000,000	..	3,250,000	..
Louisville ...	1,100,000	12%	1,400,000	10%
Dallas	1,074,000	28%	1,100,000	30%
Boston	5,250,000	25%	6,300,000	30%
Des Moines..	522,000	50%	611,830	50%
Hartford	476,000	43%	500,000	50%
Birmingham .	425,000	14%	600,000	14%
New Orleans.	375,000	84%	684,000	72%
Denver	341,800	20%	441,000	20%

Those figures represent real money, and they have been duly noted by the moguls of the N.R.D.G.A. Nor have these men failed to be impressed by the future of the electrical appliance business. Mr. Cameron tells them that before the present wired home market will be saturated, 300 billion appliances—worth 18 billion dollars, must be sold.

Moreover, Mr. Cameron tells them that there are today more millions of wired homes without electrical appliances than there were 10 years ago. In other words, that figure of 22 million wired homes cannot at all be considered static. As the sale of appliances continues, the saturation point moves ahead, too, because of the steady increase in the number of wired homes.

Now. Granted that electrical appliances are worthy of a department store's most wholesouled attention—and are to be cultivated as genuine profit-makers rather than as a mere football—what steps must the department store take?

Steps Toward Profitable Business

First of all, list prices must be maintained. The N.R.D.G.A. electrical group agreed on that unanimously. Which, as everybody in the industry will probably agree, marks a major move (providing, of course, that the department stores stick to the idea).

Second, salesmen need to be better trained. Manufacturers and retailers alike realize the enormity of the problem confronting the salesman who must try to learn the salient features and sales arguments of half a dozen different refrigerators. Manufacturers think that the only solution to this problem is for the retailers to handle fewer makes of refrigerators.

Third, outside selling, direct mail promotion, special stunts, and all the various phases of advanced specialty selling must be called into play by these big merchants.

Department stores are faced this year with tougher competition than they have known before. They got into the refrigeration business by handling the products of the "fly-by-night" manufacturers, who saw an opportunity to cut a slice of the prevalent public demand for electric refrigerators by putting cheap "jillopy" refrigerators on the market and selling them at cut prices through department stores—which, at that time, didn't know any better. That's all washed up now. Then came the worst throes of the depression, when small dealers lost their credit standing to the point where they could no longer finance purchases of refrigerators. Manufacturers of recognized brands of electric refrigerators were then forced to turn to department stores in order to obtain strongly financed outlets for their products.

Specialty Dealer Will Be Strong Competitor

In 1935, however, it's a different story. The "jillopies" are off the market. And hundreds of good specialty dealers are back in the picture again with good credit standing; and they are hungry, after their long fast, for business.

To meet their competition, and still maintain list prices and do a profitable business, department stores must now adopt specialty selling methods more extensively than ever before. If they do, they will in all likelihood make for themselves a permanent, respected, and important place in one of the finest, strongest, and most promising commercial enterprises America has today—the electrical appliance business.

WHAT OTHERS SAY

EVIDENCE is convincing that the electrical industry is steadily emerging from the depths of the depression. Energy sales are mounting, electrical products are being sold, and all marketing conditions are favorable for a gain of at least 20 per cent in business volume this year. On the firing line of sales and service the facts are encouraging and a hardened, chastened, and well-organized industry is ready and eager to go forward.

Too frequently this promising situation prevailing in field of contacts with its customers is obscured by the publicity about the episodes that occur in the upper levels of national policy and legislation. These will not stop industry progress in the marketplaces; in fact, some of their aspects create promotional effects to bring about sales.—*Electrical World.*

LETTERS

Zimmerman Predictions

Maxon, Inc.
Nela Park, Cleveland
Jan. 15, 1935.

Editor:

I noticed in your issue of Jan. 9 that you carried a number of statements by the various leaders of the industry. We previously had mailed to you a statement from Mr. Zimmerman. His statement was not among those printed.

Thinking that perhaps Mr. Zimmerman's comments regarding prospects for 1935 had not come to your attention, I am enclosing a copy.

FRED J. BOLLMEYER.

General Electric Co.
Nela Park, Cleveland

The year 1935 will eclipse all previous years in sales of electric refrigerators. This belief is justified by the great acceptance of the electric refrigerator as a utilitarian servant in the home. Millions of homes now feel that food protection is as necessary to their good health as food itself.

The great popularization of electricity during the past year also is contributing to the improved sale of electric refrigerators and other electric home appliances. The public is learning that electricity can be made more useful and economical in the home and that the more abundant and efficient use of it represents the best value derived from the spending dollar.

We may expect a great nation-wide activity in home modernization during 1935. The average family is appreciating that the kitchen has been the most neglected part of the home and therefore the most in need of improvement.

Now that we are in a position to offer a complete electric kitchen that will save more than one-half of the labor involved in this room and on such a basis that the financial responsibility can be accepted easily by hundreds of thousands of homes, we shall expect the modernization activity to develop a wealth of new business in electric refrigerator, range, and dishwasher sales.

We recently completed a tour of the United States talking to our distributors and other men interested in observing the trend of the times. We found in all sections a greater belief in improved business for the new year than we had found on similar trips during the past seven years.

The electric appliance business now is interested in all trade channels that possibly can participate in it. The electric light and power companies will aggressively promote electric service next year, while department stores and dealers in greater number will offer those appliances that have a public acceptance. With this great market activity and display of electric appliances, the industry may expect a more effective use of its $5,000,000 advertising program.

The Liftop refrigerator and combination refrigerator and range present a great opportunity for interesting the small income families in their first use of a major electric appliance. Many utilities will specialize in introducing this more economical refrigerator service to the homes of minimum bill customers during the coming year.

P. B. ZIMMERMAN, Manager,
Specialty Appliance Sales Dept.

Southern Manufacturers

Tropical Freezer Equipment Co.
546 Ballough Rd., P. O. Box 1306
Daytona Beach, Fla.

Editor:

It has been about six weeks since we have received a copy of ELECTRIC REFRIGERATION NEWS. What's the matter?

We certainly hate to miss these copies and like to have them on time so that we can be up to date on refrigeration news. Please see what you can do about it.

Why do you not list southern manufacturers in the DIRECTORY? For example, there are three porcelain manufacturers in Chattanooga alone, none of them listed. We had to write to the Porcelain Enamel Institute after receiving your DIRECTORY to find out who they were, likewise Birmingham steel and iron manufacturers, are not listed. Then we wanted to find a quick supply for nickeled head or chrome head, oval head wood screws and washers for same (countersunk) but we could not find them listed in the DIRECTORY, we spent nearly five dollars in telegrams before we could find a sure source of supply.

Another thing we can not understand is how it comes that your list only show four Milk Coolers sold during the year 1933, yet you show a reduction in inventories of some 51 jobs. Another thing that seems out of line is that the four that was sold averaged less than $100 each while the average wholesale cost of milk coolers would be over $200 each. The fact is we sold eight milk coolers or twice the number you have listed for the U. S. in one town of only 16,000 population in 1933 ourselves.

Please take this in the spirit it is sent, we want to help you and are not trying to find fault only in a constructive way.

F. O. DARLING.

Answer: According to the 1933 Statistical Bulletin compiled by the Refrigeration Division of the National Electrical Manufacturers Association (Nema), member companies sold only four milk cooling cabinets during 1933. These cabinets did not include condensing units. A number of condensing units sold for milk cooling installations were included in the figure 56,566 reported for sales of extra commercial high sides.

It is a fact that only a small share of the *milk cooling cabinet* business is done by Nema companies, although they furnish a large percentage of the condensing units for milk coolers.

Division of Business

General Electric Co.
Nela Park, Cleveland, Ohio

Editor:

Paragraph two on page 456 in the Statistical Section of the 1934 REFRIGERATION DIRECTORY shows a graph indicating the relative percentage of business done by various types of refrigeration outlets. Has this changed greatly in your opinion during 1934? Do you feel that the public utility outlet has made a better showing this year in percentage to total?

May I also have your best estimate on unit sales, average price, and retail value of electric refrigerators and electric ranges for 1934. The latter information up to and including 1933 is shown on pages 472, 473, 489, and 492 in the Statistical Section of the DIRECTORY.

As a third request may we have household electric refrigerator sales by months for 1934 to extend the graph as shown on page 471. ELECTRIC REFRIGERATION NEWS, issue of Sept. 12, carries the figures to and including July.

We realize this is asking for a lot at a time when you would much prefer to await the actual record for the year. We are under the impression, however, that you have these records in some form and that they may be supplied without a great deal of added labor.

We shall be glad to accept whatever you give us as subject to revision at the close of the year.

H. H. BOSWORTH,
Manager, Central Station Division.

Answer: Concerning the relative percentage of business done by various types of refrigeration outlets during 1934, we have as yet made no survey which would allow a comparison with last year's figures.

With regard to sales during 1934, ELECTRIC REFRIGERATION NEWS has estimated that industry manufacturers sold approximately 1,400,000 units to distributors and dealers throughout the world during the past year. Average unit price of household electric refrigerators for 1934 has tentatively been estimated at $172.00, and dollar volume of sales $240,800,000. The story on this appeared on page 1, Jan. 2 issue of ELECTRIC REFRIGERATION NEWS.

Actual figures, or even estimates, for electric range sales for 1934 are not as yet available.

Estimated monthly sales by industry manufacturers of household electric refrigerators for the months since July are as follows:

August—90,200.
September—47,600.
October—42,800.
November—36,600.

On the basis of our tentative estimate of 1,400,000 units for the year 1934, the figure for December would be approximately 48,000 units.

In using these figures, please bear in mind that they are preliminary and may be subjected to revision at a later date when further survey has been made among non-Nema manufacturers.

Manufacturers' Sales

United States Advertising Corp.
240 Huron St., Toledo, Ohio

Editor:

In your Feb. 14 issue you published information concerning the number of refrigerators sold during 1933, together with the retail value.

If you have these figures broken down by manufacturers will you please send them to us, together with similar information for 1934?

R. J. FALLER.

Answer: We are not able to supply you with a breakdown of household electric refrigerator sales by individual manufacturers.

Model Service Manual

Wescoff Air Compress Expert
35th and Brown Ave.
Kansas City, Kans.

Editor:

I am waiting for the Master Service Manual, but I ask that before you write it, take a good look at York's Manual (York Ice Machinery Co.).

The way it is written—with diagrams in different colors—it is most easy to understand. It may cost a little more, but it is a fine book.

GEO. WESCOFF.

He Learned to Be a Straight Shooter, and a Straight Thinker, Out There

A Tribute to Geoff Johnston

Slightly less than half a century ago, Geoffrey M. Johnston was born in Sarnia, Ontario, Canada. Last Saturday afternoon many citizens of the United States journeyed across the international line to St. George's church in Sarnia to attend his funeral service. While the Rev. Fred Hardy intoned the Angelican ritual, an unusual assemblage mourned the passing of a man whose kindly personality had influenced the lives of countless people scattered throughout two great countries.

During this brief contact was revealed some of the reasons why a Canadian ranchman was called upon to play a leading role in a intricate drama of American business.

* * *

When Geoffrey Johnston was a boy, he wanted to be a doctor, as were his father and his grandfather before him. It is not difficult now to understand his inclination in that direction. He had that priceless characteristic of a successful physician: an intuitive and sympathetic understanding of human nature. He needed no books to explain to him the workings of the human mind. He seemed to understand, instinctively.

No doubt his father was an understanding man, too. He knew that a doctor must know his books as well as his people. And Geoffrey did not show a sufficient interest in book learning. When he was 16 years old, therefore, Geoffrey departed from home and went to western Canada. There he worked on a ranch, became a cowpuncher. Later he went into business at Medicine Hat. There he married and raised a family. He lived for two years in Empress, Alberta. He became active in politics as a Liberal.

His ambition to be a doctor, and his interest in politics, were born in him, for his father was not only a medical practitioner but was for many years a member of the Canadian Parliment, representing the West Lambton District. His pioneering instinct was also inborn, for his grandfather was one of the first medical practitioners in that section of the country, and his great-grandfather was one of the pioneers who came to the Sarnia region with the Canadian landboom of 1835.

From one angle, the record appears to show that Mr. Johnston was in the nature of a fortunate accident in the American business field. Looking at the record another way, it appears that for three generations back the ground-work was being laid and preparations made to produce just the man needed to meet the needs of an industry at the right time.

* * *

When Mr. Johnston moved, with his family, back to the scene of his childhood, he helped organize the Canadian branch of the Universal Cooler Corp. at Windsor, Ontario. That was in 1926, the same year that Electric Refrigeration News was founded.

Soon he was selected to be manager of the American plant in Detroit. At the time, it appeared to be a thankless job, for the parent company was in a bad way and there appeared to be little hope of straightening out the difficulties.

No one seems to know exactly how he accomplished that miracle, but he succeeded, as he expressed it, "in sweeping the creditors off of the front steps" and soon had the plant doing a small business on a sound basis.

The stalwart, fun loving Geoff Johnston as a range rider in western Canada during his early manhood.

While numerous other companies were struggling for supremacy in the electric refrigeration industry, while many new companies were being started with a view to getting a share of the big prize, and while as many others were going bankrupt in the attempt to gain a place at the main table, Mr. Johnston went about picking up stray scraps of business which were being discarded or overlooked by the others.

Even when Mr. Johnston was elected chairman of the Refrigeration Division of National Electrical Manufacturers Association, the Universal Cooler Corp. was looked upon as the smallest and perhaps the most inconsequential member of the organization. The fact that his company did not appear to be an important competitor, the fact that Mr. Johnston and his company were not fighting anybody and that no one was fighting them, put him in the position of being the one man whom everybody trusted and nobody feared.

These peculiar circumstances proved to be fortunate, indeed. With the advent of the NRA, the codes, and all of the other problems brought about by government insistence upon a new kind of cooperation in industry, it is a big question as to what would have happened but for the wise and patient leadership of Mr. Johnston.

Just how or why it happened that G. M. Johnston arrived upon the scene to take his important part in moulding the character of the refrigeration industry is beyond our comprehension. Quite certain we are that he had not consciously prepared himself for the strategic position he was to occupy. We are equally sure that when he was first selected as the nominal leader of a small and discordant group of competitive manufacturers, that few had any inkling that they were picking the one man who was best fitted to guide the destinies of electric refrigeration during a period of trial and stress.

No individual will ever know all of the things which G. M. Johnston did to bring harmony and human understanding into the ranks of a struggling young industry, for he was a past master of the art of indirection.*

*Indirection—Indirect proceedure or an indirect act; oblique or roundabout course or means; often, *use of suggestion rather than direct statement or expression.*

So deft and delicate was the touch of his guiding hand that it was seldom felt and was often unnoticed.

While our opportunities for observing him in action were necessarily limited, we saw him walk unheralded into an industry full of strife and suspicion. We did not see all of the situations with which he was confronted, but we had an intimate knowledge of enough of them to observe closely the manner in which the man performed. These interesting experiences left no doubt in our minds as to the sequence of cause and effect.

Apparently no one, other than Mr. Johnston himself, gave a thought to one bit of incongruity in the situation, namely that a lifelong Canadian citizen was being called upon to preside over an important American industry while it was attempting to function in the New-Deal capacity of a legislative body. He did not consider the matter lightly, however, and promptly moved his family to Detroit and made application for U. S. citizenship.

While he was serving the industry as a whole, he continued to develop the Universal Cooler Corp., continued to build it on business which others did not want, kept it out of the main competitive area, and continued to operate at a profit to the stockholders. Manufacturing contracts increased in volume with little apparent sales effort until, last year, the great Montgomery Ward Co. laid a million dollar order on his desk.

* * *

During these depression years when so many people in high places have given evidence of their confusion regarding some of the most fundamental elements of sound business and fair dealing, G. M. Johnston stood out like a lighthouse in a storm. If anyone feels disposed to disagree with us regarding that tribute, we would call his attention to the series of advertisements stating the purposes and policies of his company, which Mr. Johnston conceived, which were written according to his explicit instructions and which have appeared regularly in Electric Refrigeration News since Oct. 12, 1932.

In those brief messages, Mr. Johnston did more than state his business creed. He wrote, in effect, a "Code of Fair Practice" good enough for this industry, or any other. And he did so months before the problem of "Codes" was thrown into the lap of the business world by the National Recovery Administration. To us, it has seemed prophetic.

About a year ago a little booklet was issued in which appeared 20 of these little sermons on sound business. The publisher of the News was so impressed with Mr. Johnston's logic that he bought a quantity of copies for distribution to friends and customers. An extra leaf was tipped in with the following comment:

* * *

"Why this book appeals to us, and why we bring it to your attention:

"In the heyday of our late prosperity—marked by business plenty and easy business morality—it required no great courage to embark upon confidence-building institutional advertising campaigns. Confidence in everything was a cardinal principle of daily existence. It provided an excellent theme upon which to build. And though such a campaign might not actually 'sell'—advertising appropriations were liberal—and its sponsors had abiding confidence that indirectly it would produce sales.

"Suddenly this picture changed. Confidence was shattered—shattered completely. People looked askance at everything—at business and business conduct and morality, at industry and government. Skepticism, suspicion and doubt dominated the nation's thinking.

"Therefore, the campaign contained in this booklet is particularly gratifying to us. It is gratifying because it sought to build confidence for an entire industry as well as for the advertiser—and because our publication was selected to carry the messages. To the best of our knowledge their campaign proved a real success and helped materially to accomplish objectives which this advertiser had in mind.—F. M. Cockrell."

* * *

We consider it fitting, again to bring some of Mr. Johnston's business philosophy to the attention of the industry whose interests he served so well. No better epitaph could be written, we believe, for the late beloved leader of the industry.

* * *

. . . There is
Always a TOMORROW

It may be wise—at time—to be an opportunist. But it is never sound policy to jeopardize tomorrow for the sake of today. We adhere strictly to this principle in the conduct of our business. The character of the commercial equipment which we offer is designed to build lasting good will, as well as to produce immediate sales.

. . . It Never
Pays to CROWD

We set our goal for sales volume according to the physical capacity of our sales organization to produce. Therefore, our commitments are conservative and impose no unreasonable selling burdens. We would rather operate conservatively and profitably than strive for bigness with its attendant penalties.

. . . A Sound
STRUCTURE

We seek to build a sound structure. To us such a structure means a good product backed by sound policies—good distributors and dealers—and salesmen who sell on the basis of superior product, quality and performance. Not an easy structure to build, but certainly one worthy to be considered as an ultimate objective.

Not . . . how big
BUT how sound

Bigness is no criterion of strength. A business is strong only to the degree that its whole structure is sound. We have said before and we repeat it again—we would rather operate conservatively and soundly than strive for undue bigness with its attendant penalties. Recent events have vindicated the wisdom of such a policy.

Is THE LAST
10% Worth While?

Many times a concern would be far better off without the last 10% of its volume. Too often that last 10%—gained by strenuous sales effort—is penalty business and jeopardizes the rest of the profitable business. Why injure 90% for the sake of 10%? Our own business-building program takes these factors into careful consideration.

More Haste
. . . LESS SPEED

There is often a temptation to solve an immediate problem quickly on the basis of today's conditions only. But we have found that such solution usually brings about several more problems tomorrow, each more serious than our original one. Therefore, in solving our problems and in determining our policies, we make every effort to consider the future as well as the present.

In WARFARE
or in BUSINESS

A business organization is like an army. It consists of units cooperating together in the battle for their common cause. Armies win battles by the units cooperating, not by obstructing each other. A business organization's battles must be won on the same basis. Our policies are such that a cooperative spirit throughout our entire factory and dealer organization is the normal order of the day.

BUSINESS must
MAKE A PROFIT

Our organization has always stood squarely against the "anything-to-get-the-business" policy. We recognize that any business operating on this basis cannot achieve lasting success. Its reputation soon becomes known. The business which it obtains becomes increasingly unprofitable. And no organization which fails to make a legitimate profit can continue to remain in business.

. . . We try to be
CONSTRUCTIVE

Advertising is destructive when it makes exaggerated claims—indulges in half-truths—or tries to cast discredit upon anyone. Selling is destructive when it does likewise—when it employs price cutting tactics and promises more than can be profitably delivered. We are making every effort to build our business on a constructive basis and our advertising and sales policies are shaped accordingly.

. . . Present Gain
FUTURE LOSS

We know that every policy which we adopt is either helpful or injurious to our industry and therefore to ourselves. We know further that while we may apparently gain by some destructive procedure, that gain is only temporary. Therefore, as a matter of good business, we endeavor to make every policy for every department of our organization a constructive one.

The "LONG HAUL" Basis

Constructive planning views current problems in the light of tomorrow as well as of today. A problem solved with today in mind only, often results in future problems even more serious. We try to shape our policies according to the "long haul" basis—and are content with a slower growth so long as that growth is sound.

. . . The PUBLIC is FAIR

We recognize that we will occupy in the public mind only the position that we deserve. The public is fair—but it is discriminating. Therefore, every unit of commercial equipment which we sell either helps or mars our reputation. And since we aspire to be regarded as good manufacturers of a good product, we design and build accordingly.

Obituary

Geoffrey Maurice Johnston
Feb. 27, 1885-Jan. 17, 1935

DETROIT—Geoffrey M. Johnston, president of Universal Cooler Corp. and chairman of the Refrigeration Division of National Electrical Manufacturers Association, died Thursday morning, Jan. 17, in his room in the Commodore hotel in New York City, where he was staying while participating in a lawsuit that involved the company which he headed.

Mr. Johnston had been president of Universal Cooler since 1929, and chairman of the Refrigeration Division of Nema since January, 1933, having been re-elected to the Nema position in October, 1934.

He was born Feb. 27, 1885, at Sarnia, Ontario, Canada, and was the son of Dr. Thomas G. Johnston, member of the Dominion Parliament. As a boy he went to western Canada and was employed as a range rider on a ranch owned by Harry Beatty, a friend of the family, in the sand hills near Hilda, Saskatchewan, located northeast of Medicine Hat.

Later he purchased a livery business in Medicine Hat and with the advent of the automobile, engaged in the automobile sales business. He sold out his interest in the automobile business in 1914 to engage in the hotel business at Empress, Alberta.

While in Empress he was active in civic and community affairs, and is remembered by the townspeople as the man who drilled a gas well, installed an electric plant, and erected a modern brick hotel.

Possessing outstanding ability as an organizer, he was held in high esteem by the Liberal Party in Alberta. He was an intimate friend of Charles Stewart, former Premier of Alberta, and the late C. S. Pingle, speaker of the Alberta House.

He was at one time Premier Stewart's personal representative and the local campaign leader in both federal and provincial elections.

In 1926 he came east to Windsor, Ontario, and became interested in the electric refrigeration industry, organizing the Universal Cooler Co. of Canada, Ltd.

In 1927 he was chosen as general manager of Universal Cooler Corp. with offices in Detroit, and in 1929 was elected president and general manager.

Mr. Johnston's wife, Gladys, a son, Richard (20), who is a Junior at McGill university in Montreal, and three daughters, Helen Louise (16), Barbara B. (12), and Mrs. Warren Pingle, survive him.

Funeral services for Mr. Johnston were held Saturday, Jan. 19, at Sarnia.

Honorary pallbearers were Messrs. McLarty, Fraser, and Considine of Windsor, Ontario; Louis Ruthenburg of New York City; and Messrs. Gleason and Wendell of Detroit.

Frigidaire Awards 38 Sales Prizes

DAYTON—Thirty-eight regional and district managers, and distributors of Frigidaire Corp. today were awarded solid bronze desk clock and fountain pen sets for exceeding the commercial products sales quotas set for them in the last three months of 1934, W. D. McElhinny, manager, commercial division, announced last week.

The winners attained from 102.7 to 203.2 per cent of the quotas assigned them, Mr. McElhinny stated, and the desk sets, suitably adorned with engraved placques stating the reason for the awards now rest in the regional or district offices.

The campaign was marked by the awarding at ten day intervals of red-face clocks for men who had slipped behind quotas.

Winners are: regional managers, R. G. Hutchison, Pacific; E. D. Davis, Rocky Mountain; H. T. Mattern, Southeastern; H. J. Walker, Jr., utility; R. D. Van Dyke, Southwestern; L. F. Skutt, north central wholesale; L. W. Curl, east central.

District managers, R. E. Robertson, Oakland, Calif.; F. H. McDonald, Miami, Fla.; H. H. Davis, Jackson, Miss.; T. J. McIntyre, Los Angeles; W. H. Forgy, Tampa, Fla.; C. O. Campbell, Billings, Mont.; A. L. Jensen, Spokane, Wash.; F. L. Koons, El Paso, Tex.; J. R. Straus, San Antonio, Tex.; R. C. Golt, New Orleans.

R. F. Callaway, Detroit; E. W. Ashmead, Chattanooga, Tenn.; C. J. Bachman, Twin Cities; D. K. Baxter, Sioux City, Iowa; Charles C. Bintz, Salt Lake City; A. L. Shellworth, Portland; S. A. Long, Wichita, Kan.; C. S. Wheeler, Indianapolis; P. M. Bratten, Ft. Worth, Tex.; H. L. Harbison, Dayton; John M. McGregor, Memphis, Tenn.; P. K. Abry, Kansas City; George Longwell, Akron, Ohio; C. W. Stewart, Seattle; H. C. Baker, Roanoke, Va.; A. F. Eichenlaub, Atlanta; E. B. Dorsee, Baltimore-Washington; R. F. Trant, Norfolk, Va.; W. B. Cooke, Albany, N. Y.; Cox & Blackburn, Houston, Tex.; H. H. Kennedy, Cleveland.

Shenandoah Co. Adds G-E Appliances

WINCHESTER, Va.—In addition to handling General Electric air-conditioning equipment, the Shenandoah Air Conditioning Co. here will carry a complete line of G-E household appliances, according to Talbot W. Jenkins, general manager of the company. The organization has leased a storeroom at 15 South Loudoun St. here.

Represents Sparton

HOWARD D. CLARK

* * *

Clark to Represent Sparton in East

JACKSON, Mich.—Howard D. Clark of the Sparks-Withington Co., manufacturer of Sparton refrigerators and radios, has been appointed factory representative for the Atlantic seaboard territory, with headquarters in Allentown, Pa.

Mr. Clark entered the Sparks-Withington organization in 1932 as a member of the Visinola home-movie department. He previously held positions with American Gear & Mfg. Co., Frost Gear Co., Electric Battery Service Co., Detroit Electric Co., and Palmer-Bee Co., Detroit engineering organization.

Hays New Representative Of McCray in Kentucky

KENDALLVILLE, Ind. — McCray Refrigerator Sales Corp. recently appointed Leonard F. Hays of Williamson, W. Va., as McCray representative in several counties in Kentucky, under the jurisdiction of A. B. Francis, Whitesburg, Ky.

Toledo Dealer Takes on Westinghouse Line

TOLEDO—Harry Wasserman, owner of the United Music Store here, has recently signed up as an exclusive Westinghouse refrigerator dealer.

Chest Models Boosted As Good Builder

CLEVELAND — As a load-builder among the low-income group of consumers, the chest-type refrigerator was recommended by several utility merchandising executives at the recent Central Station Merchandise Managers' Conference held at the General Electric Institute.

Among those who reported success in merchandising the chest-type model were P. E. McChesney, vice president, Gulf States Utilities Co.; C. L. Dunn, new business manager, Ohio Public Service Co.; J. S. Sutherland, in charge of new business activities of Alabama Power Co.; and D. M. DeBard of Stone & Webster Service Corp.

Other representatives of utilities who gave talks were Austin Monty, Philadelphia Electric Co.; Lawrence Jennings, Eastern Shore Public Service Co.; O. J. Jackson, Georgia Power Co.; H. W. Cooper, Wisconsin Power & Light Co.; and M. E. Skinner, Niagara Hudson Corp.

General Electric executives who presented G-E products and services to the merchandising men were P. B. Zimmerman, manager of the specialty appliance sales department; A. M. Sweeney, sales manager; W. M. Timmerman, engineer; A. A. Uhalt, manager, dealer division; Judge C. W. Appleton, vice president, General Electric Co.; J. R. Poteat, manager, range division; Miss Edwina Nolan, home service director kitchen section, G-E Institute; C. M. Snyder, manager dishwasher division; W. E. Landmesser, manager, commercial division; H. F. Barnes, sales promotion manager, lamp department; R. W. Shenton, workshop division; W. J. Daily, and A. L. Scaife.

Among the 150 central station merchandising executives attending the conference were:

F. Parker Allen, Gulf States Utilities Co., Beaumont, Tex.; J. E. Artopoeus, C. D. & M. Electric Co., Marion, Ohio; A. F. Ayala, Key West Electric Co., Key West, Fla.; Cyrus Barnes, New England Power Co., Boston; Theo. Blech, Public Service Co., Maywood, Ill.; H. I. Boggs, Jr., Tampa Electric Co., Tampa, Fla.; L. L. Bradford, Keystone Public Service Co., Oil City, Pa.; O. L. Broom, Carolina Power & Light Co., Raleigh, N. C.

E. J. Burger, Ohio Public Service Co., Lorain, Ohio; J. F. Burt, Pittsfield Electric Co., Pittsfield, Mass.; S. Cobabe, Wisconsin Power & Light Co., Madison, Wis.; J. P. Connolly, South Carolina Power Co., Charleston, S. C.; F. M. Cook, Empire Gas & Electric Co., Geneva, N. Y.; J. J. Cooney Citizens Light & Power Co., Adrian, Mich.; Howard W. Cooper, Wisconsin Power & Light Co., Madison, Wis.; D. E. Creps, Cleveland Electric Illuminating Co., Cleveland; A. J. Crivello, E. S. Louis Light & Power Co., E. St. Louis, Ill.

Davis M. DeBard, Stone & Webster, New York City; Fred S. Dewey, Union Gas & Electric Co., Cincinnati; C. L. Dunn, Ohio Public Service Co., Cleveland; J. M. Eakins, Public Service Co. of Colorado, Denver; J. W. Faison, Eastern Shore Public Service Co., Salisbury, Md.; E. R. Felber and L. A. Falk, Wisconsin Power & Light Co., Madison, Wis.; F. H. Farnum, New England Public Service Co., Augusta, Me.

W. B. Farnsworth, Georgia Power Co., Atlanta; Theo. R. Federer, Syracuse Lighting Co., Syracuse, N. Y.; L. A. Fiorani, New England Power Ass'n., Boston; E. J. Fitzgerald, Northern N. Y. Utilities, Inc., Rome, N. Y.; N. C. Foster, Ohio Public Service Co., Cleveland; J. E. Fanning, Toledo Edison Co., Toledo; J. H. Fuller, Tampa Electric Co., Winter Haven, Fla.; W. P. Guinan, H. L. Doherty & Co., New York City; Harry B. Hall, Wisconsin Power & Light Co., Madison, Wis.

J. R. Halladay, Ohio Public Service Co., Ashland, Ohio; W. D. Hart, Illinois Northern Utilities Co., Dixon, Ill.; G. C. Heisterman, Public Service Co. of Northern Illinois, Chicago; C. C. Henderson, Ohio Public Service Co., Alliance, Ohio; Joy A. Herbert, Ohio Public Service Co., Mansfield; H. H. Higgins, South Carolina Power Co., Charleston, S. C.; L. M. Higgs, Illinois Northern Utilities Co., Dixon, Ill.; R. H. Hill, Keystone Public Service Co., Oil City, Pa.; C. E. Hine, Cleveland Electric Illuminating Co., Cleveland; F. S. Hoefer, Metropolitan Edison Co., Reading, Pa.

F. M. Houston, Rochester Gas & Electric Co., Rochester, N. Y.; R. J. Hunts, Ohio Electric Power Co., Oberlin, Ohio; Jos. Imhoff and F. M. Ingraham, Idaho Power Co., Boise, Idaho; O. M. Jackson, Georgia Power Co., Atlanta; Lawrence Jennings, Eastern Shore Public Service Co., Salisbury, Md.; J. B. Johnson, Ohio Public Service Co., Elyria, Ohio; A. E. Jones, New Bedford Gas & Edison Light Co., New Bedford, Mass.; W. G. Keay, Associated Gas & Electric Co., Cambridge, Mass.; R. Keefe, Empire Gas & Electric Co., Auburn, N. Y.

T. O. Kennedy, Ohio Public Service Co., Cleveland; Harvey A. Keys, Byllesby Engineering & Management Corp., Chicago; E. H. Kifer, Pennsylvania Electric Co., Johnstown, Pa.; C. M. Kilian, Electric Bond & Share Co., New York City; H. E. Kintzel, Pennsylvania Power & Light Co., Allentown, Pa.; J. P. Knapp, Gulf States Utilities Co., Navasota, Tex.; R. F. Lander, East Tennessee Light & Power Co., Bristol-Virginia, Tenn.; L. R. Leslie, Delaware Power & Light Co., Wilmington, Del.

Richard Lincoln, Edison Electric Co., Boston; A. N. Lund, Keystone Public Service Co., Oil City, Pa.; P. E. McChesney, Gulf States Utilities Co., Beaumont, Tex.; Joseph McKinley, Duquesne Light Co., Pittsburgh, M. McKinney, Kentucky-Tennessee Light & Power Co., Bowling Green, Ky.; S. J. Magee, Associated Gas & Electric Co., New York City; R. J. Malcomson, Public Service Co. of Northern Illinois, Chicago; Mrs. B. E. Marsh, Nebraska Power Co., Omaha; L. W. Martin, Greenville Electric Light & Power Co., Greenville, Ohio; G. W. Milliken, Southern Colorado Power Co., Pueblo, Colo.

Austin Monty, Philadelphia Electric Co., Philadelphia; R. E. Moody, Wisconsin-Michigan Power Co., Appleton, Wis.; Vern H. Moon, Middle West Utilities Co., Chicago; W. N. Moreton, Central Illinois Public Service Co., Springfield, Ill.; M. C. Morrow, Pennsylvania Power & Light Co., Allentown, Pa.; Wm. F. Moses, Empire Gas & Electric Co., Geneva, N. Y.; T. S. Murray, Tide Water Power Co., Wilmington, N. C.; C. G. Neff, Southern Ohio Electric Co., Columbus, Ohio; J. E. North, Cleveland Electric Illuminating Co., Cleveland; E. J. Otterbein, Peoples Light Co., Davenport, Iowa; L. R. Parker, Commonwealth & Southern Corp., New York City; J. R. Pershall, Public Service Co. of Northern Illinois, Chicago; F. S. Peterson, Public Service Co. of Colorado, Denver.

R. M. Phelps, Penn-Central Light & Power Co., Altoona, Pa.; Wm. C. Pirie, Lynn Gas & Electric Co., Lynn, Mass.; Jos. Riesenman, Keystone Public Service Co., Oil City, Pa.; E. L. Robinson, Gulf States Utilities Co., Lake Charles, La.; M. R. Rodger, Central Illinois Public Service Co., Springfield, Ill.; Wm. F. Rooney, Western Massachusetts Co., Springfield, Mass.; J. T. Schilling, Iowa Power & Light Co., Des Moines; E. F. Schneider, Toledo Edison Co., Toledo; A. H. Schneider, Public Service Co. of Northern Illinois, Chicago.

M. E. Skinner, Niagara Hudson Power Corp., Buffalo; W. E. Smiley, Public Serpice Co. of Indiana, Indianapolis; J. M. Stedman, Pennsylvania Power & Light Co., Allentown, Pa.; F. J. Stone, Duquesne Light Co., Pittsburgh; J. S. Sutherland, Alabama Power Co., Birmingham; Kenneth Sutton, Gulf States Utilities Co., Beaumont, Tex.; A. A. Sweeney, New England Power Ass'n., Boston; O. H. Terrell, Ohio Public Service Co., Warren, Ohio; M. W. Thernes, Ohio Public Service Co., Cleveland; F. M. Turner, Mississippi Power Co., Gulfport, Miss.

A. E. Ward, Associated Gas & Electric Co., New York City; J. H. Warden, Brockton Edison Co., Brockton, Mass.; L. D. West, Associated Gas & Electric Co., New York City; A. J. Williams, Electric Light & Power Co., North Abington, Mass.; R. E. Williams, Wisconsin-Michigan Power Co., Appleton, Wis.

Joins Potter

JOHN C. BONNING

Former advertising agency executive, who has been made merchandising director of the Potter Refrigerator Corp.

Norge Reports Gain In 1934 Sales

DETROIT—Norge Corp., manufacturer of electric refrigerators and other major appliances, showed an increase in shipment of its products of 76 per cent and a gain of 92 per cent in orders received in 1934 as compared with 1933, according to officials of the company.

December business was six times that of the corresponding month of the previous year, it was reported.

Compromise Offered Majestic Creditors

CHICAGO—Frank McKey, trustee in bankruptcy for the Grigsby-Grunow Co., has filed a petition with the U. S. District Court seeking authorization to compromise the controversy between the trustee and the Continental Illinois National Bank of Chicago, as trustee and with the secured creditors of the estate.

Plan of the compromise is as follows:

1. The claims of the bondholder creditors to be classified in this estate as Class 1, and the claims of the unsecured creditors to be classified as Class 2.

2. The bondholders or Class 1 creditors are to waive their lien against the proceeds of the sale of the property and assets of this estate in consideration of their being permitted to participate in the proceeds of the sale of the property and assets which are not covered by the trust indenture.

3. The bondholders or Class 1 creditors shall receive 66⅔ per cent of the proceeds of the liquidation of all the property and assets of this estate, after payment of all prior claims and the costs and expenses of administration, which shall be disbursed in dividends pro rata between all of the Class 1 creditors.

4. In the event 66⅔ per cent of the proceeds of the liquidation of all the property and assets of this estate, after payment of all prior claims, and the costs and expenses of administration exceeds the sum total of all of the bonds outstanding, including interest thereon, the amount of the excess, if any, shall be placed in the fund for payment of the claims of the unsecured or Class 2 creditors of this estate.

5. The unsecured creditors or Class 2 creditors shall receive 33⅓ per cent of the net proceeds of the liquidation of all of the property and assets of this estate, after payment of all prior claims and costs and expenses of administration, and the excess fund, if any, referred to in Paragraph 4 in the plan of compromise which shall be disbursed in dividends pro rata between all of the Class 2 creditors.

Creditors will meet Thursday, Jan. 24, to consider this plan of compromise and the trustee's reports of receipts and disbursements.

Utility Forms Cooking School for Girls

SALISBURY, Md. — To promote electric cookery, Eastern Shore Public Service Co. recently organized two Little Women's Cooking Clubs for girls between the ages of 10 and 16.

One club was under the supervision and instruction of Ethel Hunter, home economist at Harrington, Del.; the other was organized at Salisbury, under Eunice Ellis, home economist here. Each club had 20 members.

The last of the six sessions was spent in preparing a complete dinner. At the conclusion of the course, each girl received a diploma certifying that she had completed the course in electric cookery by the club.

The idea will be repeated again soon.

JUST Out

FOUR NEW COMMERCIAL HIGHSIDES *by the* FASTEST *Growing Name in the Industry*

Brunner engineering "clicks" again with four big, sturdy highsides! These new commercial units have Brunner's newly-developed 4-cylinder compressors, silent and vibrationless, in a range from 3 H. P. to 10 H. P. Efficient ...trouble-free...dependable—*and backed by the fastest growing name in the industry.* Get all the facts on these new units—and on the complete Brunner line of highsides and compressors from 1/6 H.P. to 10 H.P. Brunner Manufacturing Co., Utica, N. Y., U. S. A.

NEW CATALOG NOW READY...WRITE!

Brunner

A NAME BUILT BY 29 YEARS OF SERVICE

McCORD
REFRIGERATION
PRODUCTS

COMMERCIAL EVAPORATORS

DOMESTIC EVAPORATORS

CONDENSERS

METLFLEX ICE TRAYS

SPIRAL FINNED TUBING

SPIRAL COPPER FINNED IRON, STEEL OR COPPER PIPE

McCORD RADIATOR & MFG. CO.
DETROIT, MICH.

ENGINEERING

Westinghouse Engineer Explains How Changes Were Analyzed & Made in Designing Unit for Freon

By J. H. Ashbaugh, Manager
Refrigeration Engineering Department, Westinghouse Electric & Mfg. Co.

THE Westinghouse company has in production a unit for household use which uses Freon as a refrigerant. The object of the development was to present a unit for application under conditions of extreme and sustained heat, and with improved efficiencies. A preliminary investigation of the possibility of producing such a unit showed that if we could change the refrigerant, maintaining the same piston displacement, we could get a larger capacity, and would thereby get a greater flexibility with a line of hermetic units without the tremendous tool expense incident to the development of a new unit.

Before we proceeded very far with the development of the Freon unit for household use it was self-evident that we would not be able to proceed intelligently with this design until we had the proper tools to analyze exactly what was happening in the cylinder, pipes, mufflers, etc.

In order to properly analyze what goes on in the compressor, it is necessary to take pressure indicator diagrams. An indicator diagram is a curve that shows the instantaneous cylinder pressure at each position of the piston.

Possible to Measure Losses

An accurate diagram makes it possible to isolate and measure such losses occurring in the compressor as valves, port, line, etc., restriction losses. Also volumetric efficiencies may be read directly from the diagram.

The main problem was to get an indicator diagram which would indicate what was going on under actual operating conditions, and still not cause a high loss in volumetric efficiency by taking up space at the end of the piston stroke.

Head clearance in the Westinghouse compressor is .006 in. We could not find any commercial equipment to take these diagrams with the small space allotted to the equipment. It was, therefore, necessary to first develop a device which would properly indicate the pressure in this cylinder at any given instance. Such a device was developed by M. G. Sateren of this department. It is of the balanced diaphragm type.

Briefly, the device consists of a tiny diaphragm with a contact on one side. A controllable pressure is maintained by an outside air supply on one side of the diaphragm, and the other side is exposed to the pressure within the cylinder, pipe, muffler, or other device being measured. Another contact is carried on the crankshaft which is adjustable for making contact at any position of the crank or position of the piston.

Connected to Headphones

The two contacts are connected to a set of headphones. When the pressure from the external source balances the pressure in the cylinder, no noise occurs in the headphones, and by reading the gauge on the external and adjustable air supply and changing the position of the contact on the shaft of the compressor, an indicator diagram can be made point by point for the entire compression and suction stroke. By analyzing these charts, changing the design, etc., it was possible to quickly diagnose what was going on in the compressor, and make design changes accordingly.

The new Westinghouse Freon compressor makes use of a larger cylinder head, larger piping, a larger opening through the mufflers, unloader, etc. The reasons for opening up these ports, pipes, etc., are because Freon gas is more dense than sulphur dioxide and a larger quantity is circulated, consequently, larger openings must be used. The above mentioned pressure indicator diagram indicated to us exactly how far to go in each of these devices.

The motor winding was also slightly changed in order to get the increased torque to take care of the heavier load imposed by the Freon gas. The condenser was increased in size, and the orifice through the float valve was changed, making it suitable for Freon.

One of the problems in connection with the evaporator was to locate the suction tube at a point where the refrigerant was stable and not boiling violently. In order to reduce the turbulence, baffles were placed in the cross header, thus segregating that portion of the evaporator so that the suction tube could be located in a region of comparative quietness.

In any refrigerating system the protective means and safety devices are always of tremendous interest. There are, in any system, three potential hazards which must be safeguarded. First, fire caused by overheating of the motor. Second, explosion due to the pump operating as a compressor and developing a dangerous pressure. Third, the escape of the refrigerant.

The first possibility, that of fire, is prevented by the thermostat which is built-in as part of the compressor motor, so that if the motor overheats, this thermostat opens its contacts and removes the motor from the line. This device works directly from the heat of the motor, plus the heat of a heater which is in series with the motor, and it is so faithful that this unit can be stalled on the line for days at a time without any danger of burnout.

Use of Unloader

The second possibility, that of explosion, is possible in any compressor regardless of the refrigerant characteristics, and can be caused by the building up of tremendous pressures due to a clogged line. In this compressor it is prevented from occurring by the use of an unloader.

This unloader operates on head pressure alone, excessive current of the motor, or a combination of the two. It is an electro-pneumatic device, the coil of which is in series with the running winding of the motor, so that if the load increases at the same time the head pressure increases, it will open the valve, causing the load to be immediately decreased. In this manner the unit is protected at all times against excessive head pressures.

The use of a non-toxic refrigerant, such as Freon, eliminates the third possibility of trouble.

The result of this development work was a unit which has about doubled the capacity of a similar sulphur dioxide unit. This greater capacity is available for use in either cooling the box, or ice freezing, and in recent standard tests, gives about 25 per cent faster ice freezing.

Testing for Leaks

One of the difficult problems was testing for leaks in the system. The halide torch was used, but this did not prove to be sufficiently sensitive. The final solution to the problem was a very thorough test of each sub assembly by actually using Freon and submerging the parts in warm water. The complete condensing unit is then submerged in warm water as a final test.

Experience also indicated that it was necessary to as thoroughly dehydrate the Freon unit as the sulphur dioxide unit, using the same care, and making the same moisture analysis of the completed unit.

A large number of these Freon units were placed in the field in 1934. They have given satisfaction under very extreme weather conditions, and verified our laboratory test as to greater capacity and increased efficiency.

Thyratron Control Speeds G-E Evaporator Welding

SCHENECTADY, N. Y.—Spot and seam welding machines equipped with General Electric Thyratron control, in the G-E Schenectady plant, have produced as many as 6,000,000 spot welds and 1,500,000 in. of seam welding on evaporator units for the G-E refrigerator without a single reject bacause of faulty welds.

The evaporator unit is made of stainless steel, each one requiring 310 spot welds and 75 in. of seam welding. The spot welding is carried out at the rate of 150 welds per minute and the seam welding at the rate of 72 in. per minute. It is expected that even these high speeds will be increased—seam-welding to approximately 100 in. per minute and spot welding to a correspondingly higher rate, according to G-E engineers.

New Type G-E Motor Is Announced

SCHENECTADY, N. Y. — A new type of electric motor, which utilizes a "stationary commutator" and has the characteristics of a series-type d.c. machine but which operates from an a.c. power source, has been developed by E. F. W. Alexanderson, consulting engineer of the General Electric Co.

Known as a "Thyratron" motor, the new development is made possible by recent advances in the application of electron tubes.

One motor of this type, intended for use in driving an induced-draft fan, has already been built and is now on test in the Schenectady works of the General Electric Co. It is rated 400 hp. at 625 r.p.m. and 75 hp. at 350 r.p.m. These are the specified ranges of horsepower and speed for the particular application, although the motor may be successfully controlled down to stand-still, if required. The equipment operates from a 2300-volt three-phase, 60-cycle power supply.

Among the features of this motor are the following:

(1) While running from alternating current, the motor has the characteristics of a series-type direct-current machine.

(2) The speed of the motor is independent of the frequency of the power supply.

(3) Smooth control of the speed can be obtained over the full range.

(4) In event of a momentary interruption of the supply circuit, the motor will, upon the restoration of power, start and return to the speed at which it was previously operating, without drawing excessive current from the line.

(5) The efficiency is high and the efficiency curve relatively flat—a distinct advantage, particularly in the lower portion of the speed range.

Because of these characteristics, motors of this type are applicable to such auxiliaries as fans, centrifugal pumps, compressors, and similar equipment having load characteristics such that the series type of motor can be used to advantage.

The motor has a stationary armature and a revolving field of the type used in synchronous motors. The armature, however, is provided with a special winding. Unidirectional current is supplied by means of a group of full-wave rectifiers which operate from the three-phase 60-cycle current source.

The operation of the Thyratron rectifiers is controlled by means of grids in these tubes so that power is supplied to the motor windings in the proper sequence and amount necessary to give the required torque for operation.

This control is obtained by means of a small distributor mounted on one end of the motor shaft. Speed control is obtained by varying the voltage supplied to the motor armature, by means of a phase-shifting device acting upon the same grids in the Thyratron tubes. Through this method, it is possible to obtain smooth speed control over the entire range for which the motor is designed.

The Thyratron tubes, according to Dr. Alexanderson, perform two distinct functions, one being commutation and the other being grid-controlled rectification. Each of these functions has significance in the performance of the new motor. Through the commutator function, the smooth variable speed-torque characteristics of a d.c. motor are obtainable, without any reference to synchronism with the power source used. The grid-controlled rectifier function provides the motor with continuous power control from standstill to maximum speed, without wasting power in resistance.

Frigidaire's Service Managers Meet for Annual Convention

DAYTON — Sixty Frigidaire Corp. district installation and service managers held their annual convention here last Wednesday, Thursday, Friday, and Saturday at the Miami and Biltmore hotels. Wednesday's session was a joint one with distributing organization heads.

The men, who came from all parts of the country, have jurisdiction over installation and service operations involving all of Frigidaire's household and commercial refrigeration equipment and air-conditioning systems and units.

Roy E. Smithson, national installation and service manager, presided over the convention sessions.

Speakers and discussion leaders included V. A. Hetzel, assistant installation and service manager; B. J. Vandoren, assistant commercial division manager; D. K. Banker, resident comptroller and assistant secretary; F. L. Meacham, materials and process engineering division manager; W. T. Barth, H. J. Wildenhaus, A. C. Donovan, W. V. Richards, H. J. Miller, H. A. Beck, H. E. Schreiber, R. K. Eley, Lon Cooper, P. V. Sprout, N. Potter, A. A. Kucher, M. G. Ellis, D. B. Rhinehart, V. G. Bookout, D. P. Weisner, and G. F. Weiher.

Automatic Products Issues New Catalog

MILWAUKEE — Automatic Products Co., manufacturer of controls, has just published a new condensed catalog, which gives information concerning the standard automatic controls manufactured by the company.

Throughout years of reliable service—on refrigerators, washing machines, ironers, oil burners and air conditioners—Delco motors have established an enviable reputation for quiet operation and dependability. Household appliance manufacturers and dealers have recognized the value of Delco's Sealed Lubrication, Vulcanized Rubber Cradle Mounting and End-Play Take-Up. They know that these Delco features contribute in a large measure toward the satisfaction of the retail buyer. And this satisfaction is an important consideration in the manufacturer's choice of an electric motor.

DELCO PRODUCTS CORPORATION, DAYTON, OHIO

DELCO MOTORS

PERSONALITIES

By George F. Taubeneck

Review of 1934

This is the second instalment of a short history of the electric refrigeration industry during the year 1934. First instalment was published in the Jan. 16 issue.

Pitching right into the story without a wind-up, this instalment begins where the other left off.

1935 Models Out Early

Maine Mfg. Co., Nashua, N. H., manufactured a household refrigeration line in five models ranging in size from 4.85-cu. ft. net capacity to 11 cu. ft. Cabinets were available in a variety of colors. The line, to be known as the White Mountain, was equipped with sliding shelves, a vegetable crisper, rubber ice tray, and a nine-point temperature control on the evaporator.

At the National Electrical Exposition, held in Madison Square Garden in September, only new line shown was E. H. May's Utilidor model. A more complex variation of the Crosley Shelvador idea, and comprising a door within a door, the line was understood to be coming out in 4, 5, 6, and 7-cu. ft. models with prices comparable to those quoted by the leaders in the refrigeration field.

Atwater Kent late in September announced it would enter the electric refrigeration field with a line of household refrigerators, but officials were vague when pressed for details, saying their sales policies and plans were still being formulated. It was thought, however, that the refrigerators, like the radios, would be conservatively styled. After telling its distributors that the refrigeration project had been abandoned, then reversing this decision, and wavering betwixt and between for a while, the company inaugurated a four-model line early in December.

Uniflow Mfg. Co., Erie, Pa., brought out a new line of "Lectrik-Ice" refrigerators, from 5 to 8 cu. ft. in capacity, and featuring stainless steel evaporator shields, chromium-plated tray fronts. All had porcelain interiors and lacquer exteriors.

Year's two closing months found Fairbanks-Morse announcing that a special door would feature its 1935 line, following a successful introduction to users on a small scale to test its value. The Conservador, invented by Harold A. Glasser, sales manager of the home appliance division of Bruno-New York, Inc., is a shallow compartment which fits against the outside door and serves as a special compartment for small food items.

Gibson marketed a standard type refrigerator for $79.50 plus freight, having 4.15-cu. ft. capacity and designed to compete with chest models put out by other companies. Shortly afterward, three additional models were introduced as the 1935 line, including as features the "Freez'r-shelf," a flat evaporator, fingertip ice tray release, rack in the door, and door foot pedal. The models were styled by Richard Bolton Janes.

Universal Cooler Corp. on Dec. 1 started to fill an order for 22,500 refrigeration units placed by Montgomery Ward & Co. At the same time orders for standard boxes went to Seeger Refrigerator Co. of St. Paul and for the deluxe cabinets to Leonard Refrigerator Co. Size of the cabinets ranged from 4 to 7½ cu. ft.

Preparing for the new year, Norge, in a four-day convention, showed the 1935 line and introduced a series of gas ranges. Eleven models make up the refrigerator line, which ranged in price from $119.50 to $369.50 f.o.b. and in size from 2.31 cu. ft. to 11.17 cu. ft. Although the line was substantially unchanged, minor refinements were made. Models in the refrigerator-range combination, styled alike, were also stressed as a sales feature in 1935.

Grunow announced it would sell three lines of refrigerators in 1935, standard, deluxe, and super-deluxe, lowest priced item being a 4.8-cu. ft. box delivering at $129.50, the deluxe line at $169.50, and the super-deluxe at $265, up. Assurance that the General Household Utilities Co. would continue its present operations and perhaps extend itself some, came with the granting of a substantial Federal Reserve loan to the company.

* * *

Chest Models

Most startling innovation of the year in regard to new models was the introduction of the chest-type refrigerator. Built in response to demands of TVA authorities for an unusually low-priced refrigerator, these small models had a lid rather than a door, and resembled the old-fashioned top-icer ice box.

Early in June, General Electric Co. brought out its chest model, to sell for $74.50 f.o.b. Cleveland, and designated as the "Liftop." Then Frigidaire Corp. announced its plan to market a lift-lid refrigerator for $77.50 sometime in August. It was to be known as the "Kold Chest." Sealed machines were specified, and the model had a capacity of 2 cu. ft.

Next, Kelvinator Corp. introduced its small model, branded the "Electric Kelvin Chest," with a net volume of 2 cu. ft. and selling for $77.50 plus freight. Nation-wide distribution of this model was decided upon after public interest in small capacity refrigerators in the Tennessee Valley had made it apparent that potential universal demand existed.

A chest model refrigerator featured by the Shelvador principle was Crosley's contribution to the small-model field, with prices $72.50 east of the Rockies and $75 west of the Rockies. Distribution was made through the regular channels.

Westinghouse, Norge, and Leonard soon afterward brought out their chest-size refrigerators, at the $77.50 selling price.

And so the waning days of 1934 found most leaders in the market with the small-size chests, not pushing them, perhaps, because of the small profit, but in the main using them as sales-clinchers either for prospects who wanted a small second refrigerator, or for those who were unable to afford the larger models. Sales were disappointing.

* * *

Tennessee Valley Authority

Perhaps the biggest news of the year was the entry of the United States Government—through the Tennessee Valley Authority—into the business of merchandising electrical appliances, Through the medium of the Electric Home & Farm Authority, TVA offered to finance (at low terms) the sale of low-priced electrical appliances, so that a load might be built on electrical power transmission lines leading from Muscle Shoals and other government ventures into the power business.

Demand of the government for lower prices, with the resultant decrease in margins for distributors and dealers, and the aggressive merchandising of these appliances by public utilities all combined to play hob with the refrigeration business in that territory.

Dealer protests were not long in arising. Ten Atlanta, Ga. dealers in mid-May secured a temporary injunction, which later was dissolved in federal court, against the Georgia Power Co.'s sale of TVA appliances, charging that the sale was harming their business.

A short time later, attorneys for other Georgia and Alabama dealers sent appeals to President Roosevelt to halt the sale of TVA appliances in their territory, charging it was an attempt to place the sale of electrical appliances directly in the hands of the public utilities at the expense of independent electrical appliance merchants.

Furthermore, they contended that representatives of the TVA and EH&FA and the public utilities were entering into an unlawful combination in restraint of trade, designed to drive the independent electrical merchant out of business.

In his report to President ROOSEVELT for the first 10 months of TVA operation, ARTHUR E. MORGAN, chairman of the authority, told of the progress being made in the distribution of low-cost power, encouragement of local industries, and the use of natural resources, soil erosion work, transportation, and economic planning, and asked that the program be continued and extended.

Shortly afterward GEORGE D. MUNGER came from the Central Hudson Gas and Electric Co., Poughkeepsie, N. Y., to assume commercial membership of the EH&FA, WILLIAM B. PHILLIPS was named assistant to the EH&FA president, and FORREST ALLEN director of public relations.

DAVID E. LILIENTHAL, president of EH&FA, announced near the end of May that the selling of low-cost appliances would begin in areas served by the TVA and those served by the Commonwealth & Southern Corp., utilities in Georgia, Tennessee, and Alabama.

This led to the protest to the President by Georgia dealers, while those in Alabama met with the EH&FA head to obtain what they termed a "fair and equitable" deal for themselves in connection with the government's program.

Later the EH&FA agreed to finance retail sales of approved appliances by the Cartersville, Ga., municipal utility, the first utility not using TVA power to receive this aid. Georgia dealers, meanwhile, were active. Protests were sent to the Georgia Power Co., that its sales of the interim models were killing their own sales of other models.

The problem increased in intensity with decision of Knoxville, and northern Alabama towns to abandon their former systems and use TVA power.

In a survey of dealer opinion, ELECTRIC REFRIGERATION NEWS found the war on utility merchandising of TVA refrigerators so heated in Atlanta, Ga., that other centers seemed tame by comparison. The claim that the interim models, and before their arrival the rumors concerning them, had done much to slow up sales, was generally heard.

Dealers asked a 40 per cent distributor-dealer discount as a minimum margin on all TVA model refrigerators, saying their present combined discount figured about 27 per cent.

Dealers in Nashville also expressed their opposition to the TVA, particularly because of the utilities' selling campaign. Tupelo, Miss., "proving ground" of the government's project, was one of its most ardent boosters, and dealers there could see naught but good in the EH&FA appliance promotion.

Knoxville dealers viewed the future in rosy light, expecting TVA control of the local utility company to prove a considerable boost to their sales.

Opinion in Chattanooga, however, was varied, with most dealers contending that while government TVA promotion had been of considerable help, the interim models, merchandised in the main by the Tennessee Electric Power Co., had been a potent factor in cutting down profits.

Least perturbed of the three states affected was Alabama. Here dealers felt as did those in other states regarding the general outline of TVA, but since the state's utility, Alabama Power Co., had made no move to push the interim models after its original stock of 500 was disposed of, conditions were much more friendly.

Neither was there a desire on the part of dealers to concentrate on the new chest models. The utlity, it appeared, was keeping faith with independent dealers, and in general evidenced a desire to work with them rather than against them.

At the same time GEORGE D. MUNGER, commercial manager of the EH&FA, stated that the government was not extending the sale of low-priced electrical appliances on a national scale, and added that in his knowledge no definite plans had been made to that end.

FORREST C. ALLEN, public relations counsel for the organization, in a special interview with EQECTRIC REFRIGERATION NEWS (he came all the way from Chattanooga to discuss the matter) said that he believed the dealer-protest was being greatly exaggerated, and could see nothing but help for dealers in the sales promotion program which the government was planning to inaugurate in the Tennessee Valley soon.

EH&FA next brought out a traveling kitchen, designed to show small-town and rural home-owners what electricity could do for them, and started it on its tour Sept. 3.

Miss RUTH FROW, Maryville, Tenn., went with it and conducted a series of cooking schools in the territory where TVA power was available.

Sept. 5, the EH&FA announced that it would extend finance terms to all products in a line, if the manufacturer had an approved TVA model, and also that dealers would in the future deal direct with EH&FA on time-payment sales, lifting responsibility from the manufacturer.

A model showroom was opened in Chattanooga in September, with the air conditioning exhibit as one of its principal features, as well as a household service center to further electrical appliance usage by home-owners.

Coal and ice dealers in Alabama opened a broadside against the TVA early in October, claiming government competition would be harmful to their business. The National Coal Association, vigorously opposing extension of TVA power activities, issued a booklet predicting as its probable effects (1) Displacement of a market for six million tons of coal a year due to use of water-power instead of steam, (2) elimination of 120,000 carloads of revenue freight from railroads annually, (3) loss of over 12 million dollars annually in rail revenue, half of which goes to labor, (4) loss of six million dollars in wages, and (5) the closing down of hundreds of mines.

Speaking at a meeting of EH&FA and TVA officials in Chattanooga, T. K. QUINN, vice president of the General Electric Co. pointed to the cooperation of utilities and manufacturers in the government's program, and DAVID E. LILIENTHAL, EH&FA head, looked to that organization as a pioneer in the work of providing the nation with cheap electricity, struck at critics whom he said sought a chance to gouge the unorganized buying public, and called on Southern states to give united support to the program.

On Nov. 18, President ROOSEVELT gave the TVA program the "full speed ahead" signal in speeches at Tupelo, Miss., and Birmingham, concluding his roundup of the project when he said: "What you are doing here is going to be copied in every state in the Union before we get through."

Tossing a challenge to opponents of the system, the chief executive said TVA was no longer in the experimental stage, and that "obstructionists" would do well to get in line while the getting was good.

He cited the rise in consumption of electric power since the TVA's inception, a gain of from 41,000 to 89,000 kilowatts, or 126 per cent, and said that the number of electric refrigerators installed meant more than dollars and cents—it meant a greater human happiness.

The rise in the standard of living, he said, was the best evidence that the people of the Tennessee Valley appreciated what the government was trying to do for them and were cooperating in it.

Memphis and Knoxville came into TVA during November, the former by a majority vote of its citizens and the latter by determining to take advantage of a loan and grant of $2,600,000 authorized by the PWA to help it obtain TVA power. Utilities began to take active notice of this new threat to their existence.

In a letter sent to all employees, Georgia Power Co. explained what would happen if the TVA took over the power business in that state, but emphasized that before Atlanta could take advantage of the lower power rates, an expenditure of $20,000,000 would be necessary to get a city-owned distribution system, and expressed doubt that the city would consider the difference between TVA and Georgia Power Co. rates great enough to make that change in preference to other improvements of which it was more in need.

Doubt was also expressed as to whether the city would be quick to give up the income from Georgia Power's taxes for the tax loss deemed inevitable should the municipality join up with TVA, and set up its own electrical business.

W. J. FRANKSTON, president of the Wheeling, W. Va. Chamber of Commerce, wrote that extension of the TVA program presented the danger that Wheeling and other cities in the upper Ohio Valley might be deprived of growing industries and later established ones, which would naturally be drawn to the Tennessee Valley where power rates were cheaper. He also pointed out the futility of municipalities attempting to compete with the government in bidding for new industries.

Late in November, THOMAS M. McCARTER, president of the Edison Electric Institute, expressed the opinion that the TVA setup was unconstitutional, and hinted at a test case to be brought before the Supreme Court. NEWTON D. BAKER and JAMES M. BECK were retained to study the legality of legislation affecting the nation's electric industry.

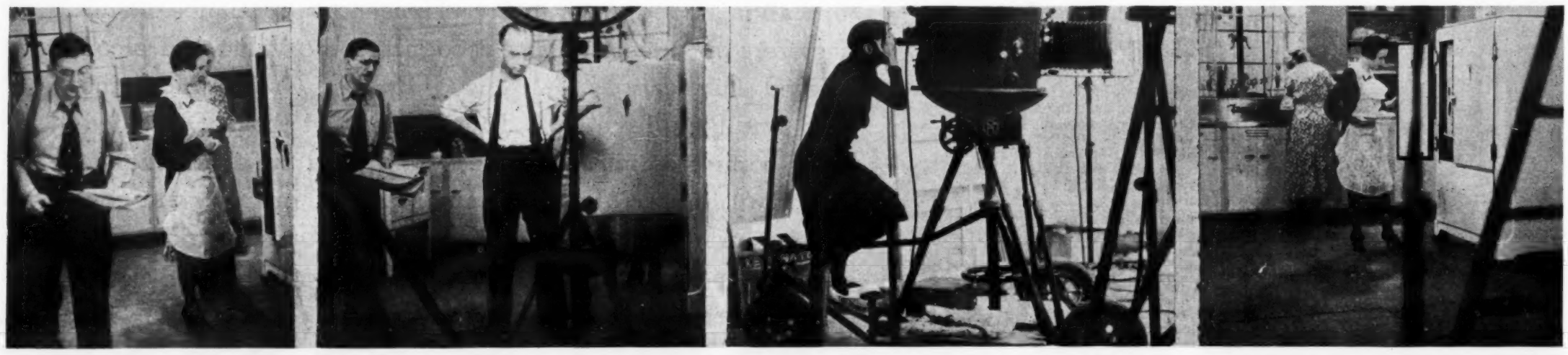
Not long after, Georgia Power Co., through newspaper advertising, announced it was jumping the price of its interim model refrigerators from $79.50 to $99.50 effective Jan. 1 of this year. Tennessee Electric Power Co., in a letter to dealers about the same time, announced that, effective Jan. 15, it would discontinue sale of the 4 cu. ft. interim models at $79.50.

Close of the year found the Edison Electric Institute, in a memorial sent to President ROOSEVELT, requesting that the government abandon its public ownership program and cooperate with the institute in a quick test of the constitutionality of the TVA. THOMAS N. McCARTER, president of the institute, gave it as his own opinion that the government had exceeded its authority in the program and was infringing on states' rights.

Citing the joint legal opinion of NEWTON D. BAKER and JAMES M. BECK, Mr. McCARTER expressed his anxiety over the "grave crisis" which confronted the industry, pointed out that utilities companies represented a direct investment of more than 12 billions of dollars and indirectly many millions more, and ended with the questions:

"Tax free public utilities financed by the government at low rates could, it is contended, furnish current at lower rates. Suppose all this to be true. Is it fair? Is it in keeping with the declared policy of the national recovery act to prevent unfair competition? Is it in the spirit of American fair play?"

Behind the Scenes in the Production of Talking Pictures Which Kelvinator Dealers Are Now Seeing



In Detroit's Metropolitan Motion Picture Studios some weeks ago was made the Kelvinator talking picture which is now being exhibited to dealers around the country. These snapshots were taken during one of the all-night "shootings" by the editor, who had a ringside seat along with Advertising Manager Vance Woodcox. The gentleman with hands on hips is Producer Al Weeks.

AIR CONDITIONING

Carrier Outlines Sales Program & Engineering Plans for 1935

(*Continued from Page 1, Column 5*)

ritories in which they do all the selling (having no dealers or sub-dealers under them).

Engineering talent for these dealers is trained and provided by the Carrier Engineering Corp. All the dealers have to worry about is merchandising. And that's what these "dealers" know best.

Testimonial Meeting

Most of the Tuesday session of the conference was given over to an old-fashioned testimonial meeting, in which some of the leading dealers, like Dave Trilling, C. L. McCrea, William Hecht of Jersey City, Harry Hearnen of Trenton, W. F. Slater of Memphis, W. J. Davis of Louisville (Brandeis Machinery & Supply Co.), and H. M. Rudio of Kansas City (Gustin-Bacon Mfg. Co.), participated.

This session was led by Merchandising Manager J. M. Bickel. Other speakers from the factory included B. S. Beach, advertising manager, H. E. Snyder, assistant general manager of the manufacturing division, C. R. Lyle, vice president in charge of sales, and J. I. Lyle, president.

J. I. Lyle, president of Carrier Corp., and Willis H. Carrier, board chairman, delivered the principle talks of the first morning session. Last year's sales were 152 per cent of the previous year, Mr. Lyle reported.

Carrier Describes Installations

Mr. Lyle was followed on the program by Mr. Carrier, who talked on "The unusual in air conditioning and refrigeration in 1934," describing some of the problems he had confronted in the air conditioning of railroad trains, the Robinson Deep Mine in South Africa, and other large projects.

Wm. Price, Jr., vice president and assistant sales manager, opened the afternoon meeting with a talk on "Codes," after which he painted a picture of the possibilities in chain stores sales in a talk illustrated by charts.

He introduced O. M. Ragsdale and J. A. Carey, Carrier chain store specialists.

V. S. Day, director of dealer contract engineering, announced plans for an engineering school to follow the regular business sessions, urging all who could to stay for the training course.

The first day's session closed with an inspirational address by Thornton Lewis, executive vice president, entitled "A Great Partnership."

Experiences of Users

From a study of data showing the experience of users of Carrier air-conditioning systems, L. L. Lewis, chief engineer, had prepared a talk which he entitled "Air Conditioning Pays Its Way."

Vice Presidents E. T. Murphy, director of the Chicago district; H. P. Gant, director of the Philadelphia district; E. T. Lyle, New York district; L. H. Polderman, newly appointed director of the Los Angeles district; and M. S. Smith, corporation treasurer, were then introduced by Chairman Lyle, and the morning session closed with an inspection of Carrier air-conditioning and commercial refrigeration equipment.

Federal Reserve Loan

A Federal Reserve loan of $1,000,000, said to be the largest single loan of its kind to private industry under government supervision, has been granted to the Carrier Corp.

Coincident with announcement of the loan, President J. I. Lyle made known a 5 per cent increase in pay for all salaried employees effective Jan. 1, and said that the loan would pave the way for increased employment and place the corporation in position to handle a larger volume of business.

Mr. Lyle reported sales for 1934 as being more than 50 per cent ahead of 1933, and stated that unfilled orders at the end of last year amounted to approximately $2,500,000, the largest carry-over of unfinished business since 1929 and an increase of more than 100 per cent over 1933.

Enlarge Contact Set-up

Under plans announced by William H. Price, Jr., the dealer contact set-up to assist Carrier representatives in engineering, selling, and servicing will be enlarged for 1935.

The chain store program will be strengthened and amplified by two new men—one in Newark, one in Chicago—whose sole responsibility will be to coordinate work done by Carrier chain store specialists, O. M. Ragsdale and J. A. Carey.

The service department will be quadrupled by using four permanent field service engineers—Messrs. Jaeggle, Obert, Goodard, and Keene. These men will have definite territorial assignments and be responsible for assisting dealers in pre-job analysis and constructive engineering service to insure trouble-free installations.

The present field staff of dealer contact men will be augmented by three additional men to assist the contact personnel.

In the Atlanta district, W. B. Thornton will be available for that district and in a position to assist in contact work throughout the southeastern and southwestern areas under Messrs Templin and Witmer.

There will be additional men for contact work in the Philadelphia, New York City, and Chicago areas, in charge of Messrs. Firestone, Carpender, and Miller, respectively.

The contact engineer in Chicago will be available for assistance to the Kansas City area under H. G. Strong.

Larger Home Office Staff

The home office engineering staff will be strengthened by the addition of a new commercial refrigerating engineer to act as contact between Newark and all dealers on application work.

More than 100 dealer representatives have enrolled in the Carrier Engineering School which opened Jan. 16.

This undertaking is directed by V. S. Day, manager of dealer contact engineering. Classroom sessions will be held in conjunction with lectures on nearly 20 important topics.

Subjects Studied in School

The scope and nature of the instruction to be given is indicated by the following summary of subjects:

Fundamental considerations for the dealer in refrigeration. Adaptability and characteristics of refrigerants, safety codes, simple thermodynamic facts, "efficiency," horsepower requirements from competitive standpoint.

Low temperature air conditioning for products, low temperature psychrometries, importance of sensible heat-total heat ratio, vapor pressure, air motion.

Cold diffusers by Carrier. Fundamental characteristics and adaptability of the several types.

Evaporative condensers. Fundamental conception. Interesting applications, field for use, economies as to water and power, etc.

Methyl chloride and Freon, refrigeration installations and operating practices and problems.

New Carrier refrigeration compressors for methyl chloride and Freon.

Store Weathermaker application. Types and sizes available, including new types and larger sizes. Range of capacities, and field of application, installations of interest.

Air distribution systems and outlets. Principles involved, effect of velocity and temperature at the outlet, inductive effect, types of outlets by Carrier.

Room Weathermaker. Range of capacity, types available and why, winter and summer use, types of control.

Spray Type Weathermakers. Description of equipment to be offered. Fundamental difference in rating with reference to surface cooling. Advantages and disadvantages.

Direct expansion Aerofin cooling coil section. Method as outlined by Aerofin Corp. for determining capacity, leaving conditions, air quantities.

Electric controls, wiring diagrams. Basic diagrams for compressors, air-conditioning units, and thermostatic circuits.

Sales Promotion Plans Outlined by Beach

The first and foremost requirement of the 1935 Carrier advertising program, Brewster S. Beach, advertising manager, told the convention, is adequate sales literature about Carrier products and applications.

Every major product handled by the dealer organization will be represented by a sales folder describing and illustrating that product and its use for air conditioning, commercial refrigeration, or industrial heating, as the case may be, he added.

"Specifically," he went on, "we are engaged in the preparation of standardized letter size sales bulletins describing such items as the improved 5,000 series compressors, the new 151 cold diffusers, evaporative condensers, store weathermakers, heat diffusing units, air outlets, etc. These will be specifically descriptive, and suitable in every way to send out, to leave with your sales prospects, or put in formal proposals. They will not be the direct-mail type of stuffers or pamphlets in which generalities only are featured."

At the head of the 1935 Carrier literature program, Mr. Beach announced, will be a big book about the Carrier organization as an institution. These will be ready about March 1.

Sales Aids for Dealers

"Supplementary to these descriptive sales folders and other literature," continued Mr. Beach, "we are working on plans to give our dealers sales aids that will impress their prospects with the benefits to be derived from using Carrier experience in applying air conditioning, refrigeration, or industrial heating, the experience of satisfied users, the economic values of proper air conditioning, and the scope and variety of Carrier work.

"The form of these sales aids is beginning to take shape as the content becomes more clearly defined. They will be aids to selling in specific fields such as stores, restaurants, product cooling, factory heating, etc.

"Next in order of importance is a plan to provide support to dealers in their own communities that will focus local attention on the dealer as a Carrier representative and offer, through him, the services of Carrier products and Carrier experience in meeting the growing demand for commercial comfort conditioning.

Cooperative Advertising

"This we propose to do by a cooperative program of localized direct mail and newspaper advertising shared on an equitable basis by the home office and the dealer.

"In this advertising, pictures of local installations and local copy will be used. It will talk directly to the home town folks about home town jobs and the home town Carrier dealer."

Details of this campaign are still in the blue print stage, but Mr. Beach indicated that an important part of the general plan will be the linking up of the local dealer's service with existing Carrier jobs in his city, through point-of-use identification signs for installation in stores, restaurants, hotels, shops, theaters, etc., having Carrier air-conditioning systems.

Dealers handling only commercial refrigeration may expect to receive sales promotion support through a plan of cooperative direct mail advertising plus point-of-use identification signs advertising Carrier-Brunswick refrigeration service in markets, delicatessens, restaurants, etc.

Results of Mailing

"Last night," averred Mr. Beach, "our new dealer in Detroit, Atmospheric Control Corp., reported receipt of 11 inquiries from the first mailing on air conditioning and commercial refrigeration.

"Three were from small neighborhood theaters, three from furriers, three from ice cream plants, and two from beverage concerns. These inquiries were the first two days' results from an initial mailing of 500, and he expects to receive more.

"We cannot, at the moment, definitely promise national advertising," said the speaker, "but we are going to try to do so, provided it can be done soundly and without sacrificing local effort to national effort."

Mr. Beach proposes this year to expend considerable energy in the accumulation of sales facts and data based on the experience of Carrier customers nationally, and to make such information available to our dealers and direct selling organization.

Exchange of Information

He wants to dig out the most successful technique used by the various Carrier dealer organizations in selling air conditioning, and to make this experience available to all other offices and dealers.

Mr. Carrier has taken a personal interest in this subject, and is writing to Carrier customers in all parts of the country for first-hand evidence of the economic benefits of air conditioning as reflected in the practical experience of users.

"This activity," concluded Mr. Beach, "is the foundation upon which advertising planning in particular must be based. It is sales research conducted in much the same way as scientific research; and leads, like scientific research, to the development of sales aids that meet field conditions in a practical way."

Lyle Says Air-Conditioning Industry Leads the Way

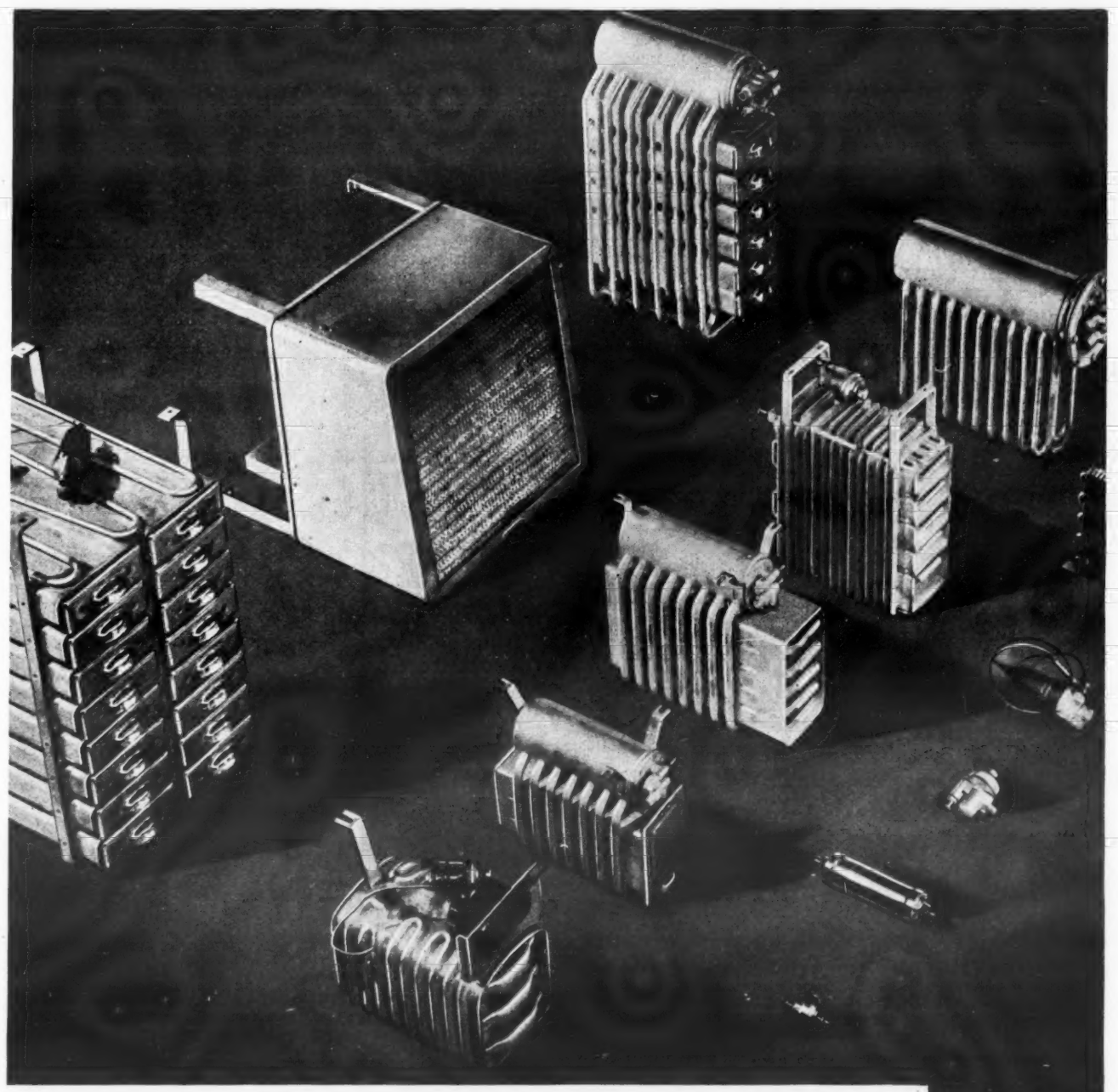
J. I. Lyle, president of Carrier, gave former President Herbert Hoover credit for giving the air-conditioning industry its first real impetus.

"After the fire and the rebuilding of the executive offices at the White House," recalled Mr. Lyle, "President Hoover made the statement that the air-conditioning industry would lead the country out of the depression. That started the ball rolling.

"Editors and writers have put into the minds of the people the thought that they should have the comfort and health which air conditioning can produce. Everyone has read of it. Many still look upon it as a mystery, but the job for dealers has been made much easier, nevertheless.

"Depression, unlike war, has some recompense," opined the gray-haired Carrier president. "When the economic world is moving too fast; when values are appreciated beyond their real worth; when our business is overprofitable; when gambling in the stock market is the order of the day; when banks all over the country are sending their depositors' money to Wall Street for such purpose; when great numbers of people are thinking only

(*Concluded on Page 16, Column 1*)

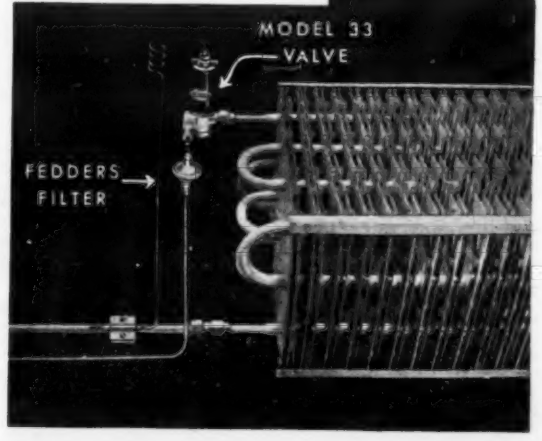


Built to Protect YOUR Name *as well as Ours . . .*

The most valuable part of your business, as well as ours, is a SATISFIED CUSTOMER. Fedders Complete Low Sides are engineered to get the most out of the High Side in quick cooling or freezing with continued operating economy. They are thoroughly cleaned and dehydrated. Fedders builds to protect YOUR name as well as ours.

Are You Getting Your Copy of the FEDDERS NEWS?

Write for Bulletins 75 and 40, they give you complete working specification on Fedders Low Sides and Appliances.



FEDDERS
MANUFACTURING COMPANY
BUFFALO, N.Y.
106 E. 19th St., New York 603 W. Washington Blvd., Chicago
303 E. 6th St., Cincinnati 209 S. Pearl St., Dallas
923 E. 3rd St., Los Angeles

AIR CONDITIONING

Dealer Tells How Demonstrations Sell Air Conditioning

(*Concluded from Page 15, Column 5*)

of easy money; when industrial centers become overpopulated as a result of shorter hours, less work, higher pay, and more pleasure time—then depression is inevitable, and has a real service to perform.

"Depression slows down business; depreciates values below their real worth; compels efficiency; cuts off borrowing on fictitious collateral; stops speculation and stock gambling; forces a redistribution of population to localities where their services are needed.

Appreciate Simple Living

"It compels us to admire the Quaker and to appreciate the simple and homely pleasures of life and to realize our responsibilities to our homes and communities."

Though we all may hope that there will never be another depression, one will certainly come, he believes. Neither the individual nor the masses will ever so control themselves that business can be kept on an even keel, he states.

Carrier Engineering Corp. started in 1915 with eight men, he pointed out. Today all eight are still active in the business. This original octette helped merge the York Heating & Ventilating Co. and the Brunswick-Kroeschell Co. with Carrier in January, 1931.

"General business has improved," concluded Mr. Lyle. "Confidence is returning. The water has been squeezed out, leaving sound values. No longer is there reason to fear rubber dollars or any further inflation.

"1935 will be a much better year for us all. There will be little new building at first. The latter part of the year, however, will see much improvement in new construction; and 1936 will be a fine year for us all.

"Air conditioning and commercial refrigeration will receive much attention in coming years. Never was there an industry in which the annual sales were so small that received anything like the publicity as these two industries have in the last four years."

Rudio Tells How to Sell Conditioners

H. M. Rudio of the Gustin-Bacon Co., Kansas City, declared that his concern's success could be attributed to a departure from conventional methods of selling. Just how Gustin-Bacon did get business he related to the convention frankly, in an easy, common-sensical, familiar manner.

"In the beginning," he recalled, "something like 20 men were employed to go out and ring doorbells. At the end of two weeks, they had 10 men left. There was practically no business produced from this operation.

"The men were given a section of the city and sent out to canvass. They knew nothing about air conditioning, had had no previous experience, and they failed.

Direct Mail Failed

"Later, a direct-mail advertisement was sent out. We got out a small four-sheet paper with pictures of several installations. Some 8,000 of these were sent out, but very little results were obtained from them.

"In addition, the company had time on the radio. Its announcement came between a big program and the weather report. This particular form of advertising did very little good. I don't believe radio advertising, unless hooked up with a national program, is particularly productive."

At the start of the 1934 season, plans were discussed as to the method of proper advertising. Last spring, after some little discussion, an air-conditioning installation was made in the company's offices, consisting of a Carrier 39-L 7 unit, and a 10-ton and a 3-ton machine.

This equipment took care of a general office and five private offices, having 35 employees working on a total floor area of 4,200 sq. ft.

"I don't see how anybody can sell air conditioning unless they have their own place of business conditioned," averred Mr. Rudio. "You go out and talk to a man, and the first thing he says is: 'Well, what are you doing about it yourself?' Unless you can take him and show him your installation, you haven't much opportunity to sell him.

"We worked out our costs on this particular system, and on the basis of selling cost—not the price that we paid for it but the retail price of our equipment—and amoritizing over a period of 10 years, this system cost 17 cents per employee per cooling day."

Mr. Rudio reminded his hearers that it was genuinely hot in Kansas City last summer. On May 30 the temperature hit 100° F. After that for 19 days it dropped down to 95°. On the 19th of June, however, the temperature hit 100°, and until the 19th of August never dropped below that figure. Usually it was 108, 110, and 112° F.

"On our back door on the north side, the temperature about 2 o'clock in the afternoon, which was the hottest time of the day, averaged around 110°," he recalled. "We never had temperatures in our office over 80°. It really sold our staff on air conditioning.

Have Party in Office

"Our officials were so enthusiastic about what we had done that they decided the real way to get at the people who were our prospects—people who had money—was to have a party at our office.

"The first one we had was an evening party. Mr. Gustin invited all his friends. Fifty were present. We got up a race track program (they are race-track minded out in Kansas City) and called it the Midsummer Smack meeting.

"The field horses were bridge, stud, draw poker, dice, and so forth. Everybody had a great time. From that particular dinner, we will get four installations. It cost us about $8 per person to put on that party, and we feel that it was very well spent.

"The party didn't break up until about 1 o'clock. Incientally, at 8 o'clock that night the temperature outside was 110°. We had a temperature of 80° F. in our office, and even with the extra load of all these additional people, the temperature didn't get any higher than 82°. We didn't have to tell these people about air conditioning. They found it out for themselves.

"We never attempted to say anything about it, but there were plenty of men who asked to see the equipment.

"This party was so successful that we figured that we could do something more with it," Mr. Rudio continued, "so we had a little office upstairs in which we put additional ducts. We painted it an olive green, and hung up pictures of winter scenes; and there we had several luncheons, inviting different groups each time.

"The first party we had was for a group of the heads of different industrial plants. Another party we gave was for the leading business men of the downtown section, including the heads of merchandising concerns, dress shops, real estate owners, and hotel operators.

"Still others were given for railroad officials, and the local purchasing agents' association.

Cost of System Given

"All these luncheons were highly successful, and we put them on at a cost of about $2 per person. So much comment was received during the luncheons that we were usually asked to describe the system.

"We explained that our air-conditioning system cost us per person 17 cents per cooling day. There wasn't a man attending any of these luncheons or these dinners who didn't feel that air conditioning was well worth while.

"In other words, it was a practical demonstration of what air conditioning really does. You can go out and tell a man all about air conditioning—how cool and comfortable he will be—but unless you show it to him, he really doesn't realize it.

"Just as a concrete example, we have an insurance company in town. The head of the insurance company attended one of these parties. The next day he called up and wanted his private office conditioned.

"We went out and measured it up and put in a 3-ton unit cooler in his office. He wanted to obtain a temperature of 70°, but we talked him out of that, and finally gave him a condition of 78°.

"He went home and told his wife that he had bought cooling for his office. She told him if he could have cooling in his office, she could have it in her home. So we put in a 10-ton refrigeration machine in his home. We put in coils, speeded up the fans, and did a very nice job of cooling. His house is now quite comfortable."

Advertising Cost Less

Gustin-Bacon accountants found that the cost of this effective advertising was only two-thirds the cost of the ineffective advertising done in 1933, from which very little business resulted.

"In every quotation we make," Mr. Rudio told the Carrier convention, "we break down our proposal into owning and operating costs, based on an assumed amortization, and including taxes and insurance, and so forth.

"Furthermore, we take this total yearly cost and consider it on the basis of possible additional revenue to the customer. We attempt to show him from his own viewpoint as to how it is going to make money for him.

"For example, we are figuring on several office buildings at the moment. For an office building, we break down our costs on a square foot basis per year. That enables the owner of the building to know exactly what he has to add to his rental space per square foot.

Breakdown of Figures

"For hotels, we give a breakdown on the cost per room per day. Many hotel people agree there should be no difficulty at all, if they had cooled rooms, in getting a dollar per day extra. Our actual cost of air conditioning in a first-class hotel is about 50 cents a room per day—both owning and operating cost.

"We don't attempt to sell these hotels air conditioning for an entire building at one time," he added. All the hotels have been pretty hard hit.

"In the case of one hotel, we have taken half a floor. They are doing some redecorating, and we have laid it out for air conditioning, with the understanding that they can add on as they go along.

"Hotels are receptive to that selling method, because they can thus prove to themselves that air conditioning is really profitable. After you get one job in the hotel, you don't have to sell any more jobs; the hotel will *buy* them.

"Our reason for breaking down these costs is twofold," explained the Kansas City dealer. "In the first place, if you go to a man and tell him he should spend six, seven, or ten thousand dollars on an air-conditioning installation, immediately he thinks that is a lot of money. He always thinks he is hard up—even if he has plenty of money.

"If you give him breakdown cost figures, though, he can see the reason for air conditioning a little more readily.

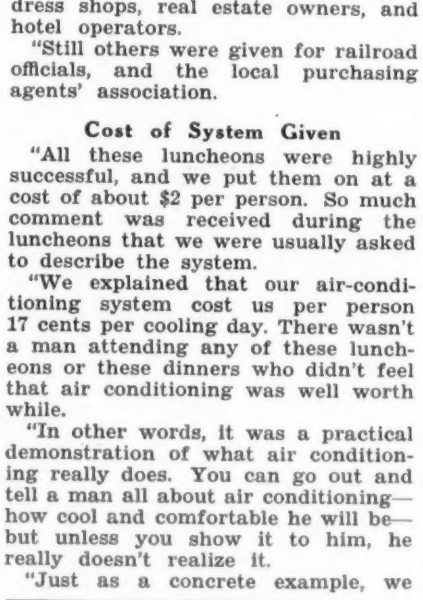
"For instance, you tell him 50 cents a day for a hotel room. He doesn't worry about 50 cents a day, because he knows he can get a dollar extra for the room, and make 100 per cent on his investment, besides bringing his hotel up to date.

"We believe that use of this method, in addition to our entertaining, will really put our air-conditioning business forward in 1935," concluded Mr. Rudio. "We plan this year on having more parties, to keep prospects reminded that they can be comfortable.

"After they find out that someone else is comfortable, you can sell business men on air conditioning, because every man in business has a certain pride in his own particular establishment. If another office or store is conditioned, the employees talk about it, everyone talks about it, and he wants the same sort of thing.

"So, by actually conditioning your own office, you lead the way."

President



H. W. SWEATT
Recently elected president of Minneapolis-Honeywell Co., controls manufacturer.

Dealers Present at Carrier Convention

Attendance at the Carrier dealer meeting:

C. L. J. Ager, Jr., Hoy & Co., Albany, N. Y.; James Azat, Jos. S. Azat, Wilkes Barre, Pa.; L. L. Barnes, Clare & Co., Atlanta; Carl Barth, Good Housekeeping Shops, Woonsocket, R. I.; L. M. Baum, Keil Motor Co., Wilmington, Del.; Trice M. Bell, Bell Engineering Co., Tampa, Fla.; Gerard C. Betlem, Henriette Betlem, Jan C. Betlem, and John Betlem, Betlem Heating Co., Rochester, N. Y.; T. Bingham, Trask Engineering Co., Boston; C. W. Blakesley, Manufacturers Sell. Co., Trenton, N. J.; H. T. Blocker, Blocker Air Conditioning Corp., Newark; Arthur Boot, Boot & Co., Grand Rapids, Mich.; H. J. Brandeles, H. J. Brandeles Corp., Utica, N. Y.; John M. Brody, Jr., Dravo-Doyle Co., Pittsburgh; Joe Brower, Montgomery Eng. Co., Jersey City, N. J.; F. L. Brown, Jr., Jamieson-McKinney Co., Ithaca, N. Y.; H. L. Brown, Richmond Air Equipment Co., Richmond, Va.

Abry S. Cahn, Cahn Electric Co., Shreveport, La.; Chas. J. Chalfonte, J. Harry Hearnen, Trenton, N. J.; Julien Chaqueneau, Quinn Engineering Corp., New York City; Warren F. Clare, Clare & Co., Atlanta; M. K. Clark, Richmond Air Equipment Co., Richmond, Va.; F. H. Coffin, Coffin & Smith, Scranton, Pa.; J. Cohen, Trilling & Montague, Philadelphia; H. Cohen, Uniontown, Pa.; J. F. Connelly, Connelly-Murray Refrig. Co., Schenectady; E. R. Cooney and J. L. Cooney, Cooney Refrig. Co., Buffalo; J. W. Cooper, Boot & Co., Grand Rapids, Mich.; Clifford Corey, J. Geo. Fishcher & Son, Saginaw, Mich.; Leland Cramer, Automatic Coal Burner Co., Dayton; P. E. Dake, Connelly-Murray Refrig. Co., Schenectady; W. J. Davis, Brandeis Mach. & Sup. Co., Louisville, Ky; E. S. Dewitt, National Elec. Supply Co., Washington, D. C.; W. H. Dolan, Jr., Jennison Co., Fitchburg, Mass.; H. O. Dolph, Globe Mach. & Supply Co., Des Moines, Iowa; Harold C. Dunn, Treat Hdwe. Corp., Lawrence, Mass.; A. E. Ehrhardt, Schorer Co., Hartford, Conn.; H. E. English, Columbus Htg. & Vent. Co., Columbus, Ohio; Chas. Eyster, H. E. Goodling Elec. Co., York Pa.

L. Fischer, Connolly & Schmidt, New York City; W. S. Foresman, National Elec. Supply Co., Washington, D. C.; R. E. Frederick, Automatic Coal Burner Co., Dayton; Hill Garrison, Gustin-Bacon Mfg. Co., Kansas City; R. A. Gemmill, Trilling & Montague, Philadelphia; E. W. Gifford, Air Comfort Corp., Chicago; J. T. Gouger, Consolidated Engrs., Inc., Springfield, Mass.; R. R. Green, Green Electric Co., McPherson, Kan.; C. E. Hansen, Smith & Oby Corp., Cleveland; F. J. Hardner, Hersh-Hardner Eng. Co., Allentown, Pa.; R. H. Harper, Consolidated Engineers, Inc., Springfield, Mass.; Ray Harten, Harten-Knodel Distributing Co., Cincinnati; Merrill Hawkins, General Appliance Eng. Corp., Fall River, Mass.; J. H. Hearnen, J. Harry Hearnen, Trenton, N. J.; Wm. Hecht, Montgomery Eng. Corp., Jersey City, N. J.; Wm. Hehnke, Hehnke-Lohmann Co., Grand Island, Nebr.; C. W. Helstrom, Globe Mach. & Supply Co., Des Moines; E. A. Herre, Herre Brothers, Harrisburg, Pa.; Geo. W. Hersh, Jr., Hersh-Hardner Eng. Co., Allentown, Pa.; Don R. Hershberger, Quinn Engr. Corp., New York City; W. J. Hogan, Jr., Clare & Co., Atlanta; A. A. Hoppe, Oklahoma Elec. Sup. Co., Oklahoma City; H. W. Hottel, Hottel Bros., Inc., Bethlehem, Pa.; F. J. Huber, National Elec. Supply Co., Washington, D. C.; Wm. Hurley, Trask Eng. Corp., Boston; Clinton Ide, Power Eng. Corp., Wilkes Barre, Pa.; R. J. Illingworth, Illingworth & Sell, Lancaster, Ohio; A. B. Jackson, Alton B. Jackson, Boston; M. Jamison and W. K. Jamison, Automatic Coal Burner Co., Dayton, Ohio; H. K. Jennings, Hal K. Jennings Eng. Co., Akron, Ohio; B. S. Johnson, J. Geo. Fischer & Son, Saginaw, Mich.; A. W. Jordan, Tucker & Rice, Inc., Worcester, Mass.; Leo Keil, Keil Motor Co., Wilmington; J. H. Kellett, Treat Hdwe. Co., Lawrence, Mass.; Wm. Kennedy, E. Keeler Co., Williamsport, Pa.; J. S. Kimmel, Electric Equipment Corp., Davenport, Iowa; C. E. Kinney, Bjornson & Wessel, Omaha; Wm. Klabunde, Montgomery Eng. Corp., Jersey City, N. J.; Walter Klie, Smith & Oby Corp., Cleveland; Benj. Knowles, Quinn Engineering Corp., New York City; D. J. Kraus, Harten-Knodel Distributing Co., Cincinnati; W. E. LaVelle, Malone & Moles, Sioux City, Iowa; H. C. LeVine, Atmospheric Control Co., Detroit; Paul Lockwood, Specialty Service Corp., Brooklyn; Julien Loeb, Specialty Service Corp., Brooklyn; S. E. Locke, Sydney E. Locke, Los Angeles; L. W. Long, Richmond Air Equipment Corp., Richmond, Va.; Henry Lutes, Columbus Htg. & Vent. Co., Columbus, Ohio; D. J. Lyons, Daniel J. Lyons, Worcester, Mass; H. T. Lyons, Hersh-Hardner Eng. Co., Allentown, Pa.

Frank McArdle, Hauxwell & Smith, Inc., Port Chester, N. Y.; C. McCaffray, Air Conditioning, Inc., Baltimore; P. H. McCarty, McCarty Johnson Htg. Co., Denver; C. L. McCrea, National Elec. Supply Co., Washington, D. C.; M. T. McGee, Schorer Co., Hartford, Conn.; R. D. McLain, E. Keeler Co., Wiliamsport, Pa.; E. D. Malone, Malone & Moles, Sioux City, Iowa; Thomas Mandell, Trask Eng. Corp., Boston; H. R. Marlatt, Globe Mach. & Supply Co., Des Moines; Trafton Mason, Richmond Refrig. & Supply Co., Westport, Conn.; M. Mercer, H. D. Morehouse & Son, Utica, N. Y.; H. A. Middleton, Middleton Elec. Co., Sedalia, Mo.; L. G. Miner, Malone & Moles, Sioux City, Iowa; Fred Moore, Coffin & Smith, Scranton, Pa.; Kenneth Moore, Air Comfort Corp., Chicago; J. F. Munder, Quinn Eng. Corp., New York City; R. J. Murray, Connelly-Murray Refrig. Co., Schenectady; O. Nicholson and H. Nutt, Montgomery Eng. Co., Jersey City, N. J.; H. T. Ober, Malone & Moles, Sioux City, Iowa.

Edwin J. Ogden, North Jersey Air Conditioning Co., Summit, N. J.; H. B. Orr, Dravo-Doyle Co., Pittsburgh; G. E. Osborn, J. Geo. Fischer & Son, Saginaw, Mich; Wm. Parkerson, Air Control Eng. Co., New Orleans; Geo. Pearson, Jr., Smith & Pearson, Auburn, N. Y.; A. F. Pierce, Blocker Air Conditioning Corp., Newark; H. H. Piou, Sears & Piou, St. Louis; A. K. Poor, Trask Eng. Corp., Boston; C. D. Potter, Smith-Gibbs Co., Providence, R. I.; H. J. Prebensen, Air Comfort Corp., Chicago; J. M. Price, National Elec. & Supply Co., Washington, D. C.; Wm. Quigley, Fuel Oil Equipment Co., Miami, Fla.; J. J. Quinn, Quinn Eng. Corp., New York City; A. E. Rabe, Consolidated Engineers, Inc., Springfield, Mass; J. A. Reagan, Buford Brothers, Inc., Knoxville, Tenn.; E. P. Renouf, Strauss-Frank Co., Houston, Tex.; J. J. Redfern, Hoy & Co., Albany, N. Y.; Harry Richmond, Richmond Refrig. & Supply Co., Westport, Conn.; H. M. Rudio, Gustin-Bacon Mfg. Co., Kansas City.

Geo. Saliske, Tychsen Brothers, Hartford, Conn.; H. E. Sands, Chas. Dallas Reach, Newark; R. M. Sausaman, Smith & Oby Corp., Cleveland; H. W. Schorer and T. J. Schorer, Schorer Co., Hartford, Conn.; G. L. Scobell, Scobell & Winston, Erie, Pa.; R. C. Shailer, Good Housekeeping Shops, Providence, R. I.; H. C. Sharp, Connolly & Schmidt, New York City; H. C. Sharp, Smith Oil & Refining Co., Rockford, Ill.; Edward Shea, Quinn Eng. Co., New York City; C. A. Shelton, C. A. Shelton, Ithaca, N. Y.; N. A. Shepley, Specialty Service Corp., Brooklyn; S. Sheridan, Cooney Refrig. Co., Buffalo; Oscar Sherwin, Electric Home Co., Erie, Pa.; J. U. Sicard, Good Housekeeping Shops, Pawtucket, R. I.; W. F. Slater, W. F. Slater Eng. Corp., Memphis; A. B. C. Smith, Quinn Eng. Co., New York City; L. A. Smith, Coffin & Smith, Scranton, Pa.; R. H. Smith, Hauxwell & Smith, Port Chester, N. Y.; L. J. Snyder, J. Geo. Fischer & Son, Saginaw, Mich.; Rufus Soule, Tucker & Rice, Worcester, Mass.; S. P. Southmayd, Consolidated Engrs., Inc., Springfield, Mass; C. V. Stevens, W. A. Brown & Son, Salisbury, N. C.; W. W. Stuart, Globe Mach. & Supply Co., Des Moines; R. L. Sulivan, Brandeis Mach. & Supply Co., Louisville.

C. A. Tantum, Manufacturers Selling Co., Trenton, N. J.; G. F. Taubeneck, ELECTRIC REFRIGERATION NEWS, Detroit; C. D. Taylor, Dravo-Doyle Co., Pittsburgh; E. O. Thomas, Malone & Moles, Sioux City, Iowa; W. A. Thompkins, Treat Hdwe. Corp., Lawrence, Mass.; O. R. Tolerton, Tolerton, Eng. Co., Youngstown, Ohio; H. C. Trask, Trask Eng. Corp., Boston; D. M. Trilling, Trilling & Montague, Philadelphia; W. A. Turnbull, N. Y. State Elec. & Gas Co., Binghamton, N. Y.; R. W. Turner, Treat Hdwe. Corp., Lawrence, Mass.; T. R. Walker, Columbus Htg. & Vent. Co., Columbus, Ohio.

W. L. Walker, Schorer Co., Hartford, Conn.; Harry Weinberg, Specialty Service Corp., Brooklyn; Julius Wessel, Bjornson & Wessel, Omaha; H. E. Wheeler, Air Comfort Corp., Chicago; R. E. White, Electric Equip. Corp., Davenport, Iowa; C. E. Whiting, Schorer Co., Hartford, Conn.; Chas. Whitney, Trilling & Montague, Philadelphia; Chas. Winemiller, H. E. Goodling Elec. Co., York, Pa.; C. L. Winter, Home Appliance Co., Battle Creek, Mich.; W. F. Zwevelle, Specialty Service Corp., Brooklyn.

Heads Promotion

JOHN GARCEAU
He will head air-conditioning sales promotion activities for Kelvinator Corp.

Lipman Ups Output Of Air Conditioning Units for Trains

BELOIT, Wis.—General Refrigeration Corp. here has increased its production schedule to handle the demand for Lipman railway air-conditioning condensing units and Lipman commercial machines.

Originally developed in 1931, Lipman's railway air-conditioning equipment was one of the first large-capacity completely air-cooled Freon compressors.

More than 600 of the units were in daily operation last year.

Capacity of the units is approximately six tons of refrigeration under normal railway operating conditions. Among features in its design are the incorporation of suction line strainers in the suction line flange, a crankcase oil return check valve, and a special heavy duty crankshaft seal.

A compressor of the same design as the railway air-conditioning unit is used on the standard 10-hp. water-cooled Freon machine. These machines are used for stationary air-conditioning work and for regular commercial applications.

Special alloy castings used in these machines are produced in General Refrigeration Corp.'s own foundry. Precision boring machines are used for the final finish on the connecting rod bearings and the crankshaft main bearings, and assembly of the units is facilitated by the use of roll-over jigs.

Compressors destined for railway service are mounted on special units and tested under actual operating conditions before shipment.

Four Kelvinator Coolers Installed in Houston Fashion Shop

HOUSTON, Tex.—A year-'round air-conditioning system was installed recently in Ben Wolfman's apparel shop, "The Fashion," by Straus-Bodenheimer Co., Kelvinator distributor for the Houston territory, under the supervision of R. C. Holsworth, commercial sales engineer.

With a total floor area of 4,010 sq. ft. and a room capacity of 68,200 cu. ft., the first floor was supplied with air conditioning through the use of two units mounted over the display windows and one placed under the stairway. The rear unit supplies conditioned air to the fitting rooms under the mezzanine through a series of ducts having an adjustable register in each fitting room.

Surplus air flows into the main room through two spreader heads, one on each side of the stairway.

A millinery department on the second floor, with floor area of 3,990 sq. ft. and room capacity of 41,900 cu. ft., is conditioned by a unit mounted over the small office in a corner of the room and fitted with a spreader head.

The condensing units are placed at the rear of the basement, and are used in connection with a water pump and a forced draft cooling tower with a 43 in. exhaust duct.

The equipment produces a differential of 24° on the ground floor and 22° on the second floor. The basement has been lowered approximately six degrees in temperature and is being supplied with ventilation at the rate of 12,000 cu. ft. per minute from the suction side of the cooling tower.

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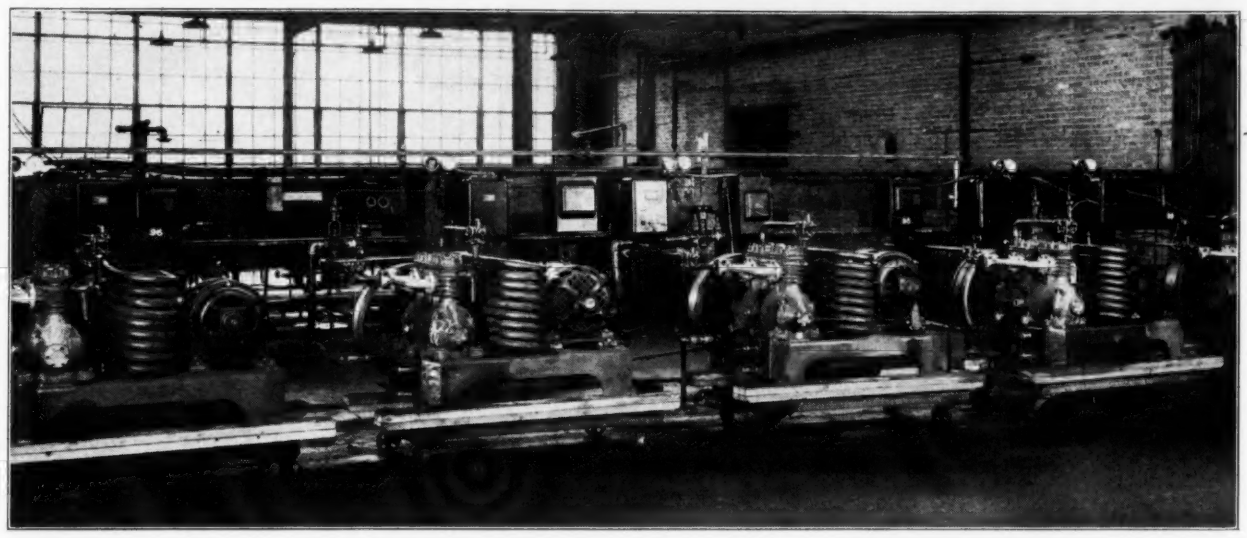
Lipman Tests Railway Air-Conditioning Units



Lipman Freon compressors for railway air-conditioning applications await testing on the line at the Beloit, Wis., factory. Actual operating conditions are duplicated as nearly as possible for testing the condensing units.

Kelvinator Overcomes Air Conditions in Cocktail Rooms

NEW BEDFORD, Mass.—Kelvinator air-conditioning equipment is credited with a large share in the success of the Jolly Whaler and the Spouter Inn, unique bar and cocktail rooms which opened last September in the New Bedford hotel here.

The rooms have many innovations in architectural design and interior decoration, combined with the newest mechanical equipment.

Crossing a gangplank outside the inn, patrons of the Jolly Whaler find themselves in a reproduction of the cabin of an old whaleship. Light filters through the hatches overhead, through the portholes ocean billows rise and fall with ships in full sail against the distant horizon, lamps swing in unison from deck beams above—devices to simulate the roll of a ship at sea.

To assure accurate reproduction, the whaleship's cabin allowed little headroom, and the typical old inn was built with a low ceiling. When filled to capacity these rooms would soon become unbearable; insufficient fresh air and clouds of tobacco smoke would prohibit their use for the purpose intended. Kelvinator air conditioning solved this difficulty and made possible the materialization of the original plans.

The air in Spouter Inn and the Jolly Whaler is completely changed every two minutes. Fresh outside air is drawn in by large fans and forced through filters which remove all dust, smoke, and impurities from it. The air then continues through humidifiers where fine sprays of water put in the correct amount of moisture. It is next cooled to the proper temperature by a Kelvinator cooling unit with the refrigeration furnished by a condensing unit powered by a 7½-hp. motor.

The air, cleaned, filtered, humidified, washed, and cooled, enters the rooms through openings near the ceiling in such a way that no draft is created.

The air-conditioning equipment was sold by W. G. Beserosky of the Standard Electrical Co. of New Bedford, Mass., and installed and serviced by Post & Lester Co., Providence, R. I.

Air Conditioning Council Of Kansas City Elects New Officers

KANSAS CITY — Officers for the coming year were elected by the Air Conditioning Council of Kansas City at the annual meeting held recently at the Bellerive hotel here. Officers elected are as follows:

Nate W. Downes, chief engineer for the Kansas City School Board, chairman; W. L. Cassell, consulting engineer, vice chairman; G. W. Weston, secretary and manager, Electric & Radio Association, vice chairman; Walter Gillham, consulting engineer, vice chairman; G. E. Olson, treasurer; Albert L. Maillard, Kansas City Light & Power Co., executive secretary.

The council is composed of two classes: underwriting members (manufacturers or distributors, and the interested utilities), and associate members.

The underwriting members cooperate in publishing a four-page promotional newspaper called the Air Conditioner, which is mailed each month to a selected list of 3,000 prospects.

The folowing organizations are present 1935 underwriting members:

Air Conditioning Corp. (General Electric); Frigidaire Corp.; Gustin Bacon Mfg. Co. (Carrier); Kansas City Gas Co.; Kansas City Ice Co.; Kansas City Power & Light Co.; Moser & Suor, Inc. (Norge); Natkin & Co. (Westinghouse); Olchoff Engineering Co. (Frick); Townley Metal & Hardware Co. (Servel).

The application of Stewart-Warner-Alemite Co. (Chrysler Airtemp) for membership has been presented.

Frigidaire Branch Opens Air-Conditioning School

NEWARK — Frigidaire Corp. held the opening session of a new air-conditioning school at 554 Broad St. here last Friday night. Subsequent sessions will be held each Friday.

The course will cover heating, cooling, filtering, ventilating, distribution, humidifying and dehumidifying of air, discusion of the physiological need for air conditioning, and a study of the potential market.

Admission to the course is free, but attendance is limited to architects, engineers, heating, piping and ventilating contractors, oil burner and refrigeration dealers, and their employees.

Georgia Power Men Study Conditioning

ATLANTA—A special school on air conditioning, sponsored by the Georgia Power Co. for its power salesmen, commercial salesmen, and service men, was held here the week of Jan. 7, in cooperation with manufacturers.

First three days of the school were devoted to technical discussions, led by C. L. Toonder of the Kelvinator Corp. The latter half of the week was given over to the study of air-conditioning sales work and applications.

O. M. Jackson, merchandising manager, presided at the last half meetings, while the earlier sessions were under the direction of E. Fay Pearce and John L. Underwood.

Hold-Heet Products Sold in Units

CHICAGO—Just released by Russell Electric Co. of this city is a new catalog covering its line of "Hold-Heet" winter air-conditioning equipment.

Russell air-conditioning equipment has been devised to be sold on the unit plan. The equipment is split into divisions or units, each of which can be sold and installed individually.

Unit No. 1 consists of four control devices—a room thermostat, transformer, stack limit control, and damper motor. The room thermostat is set at the desired temperature, the damper motor opens and closes the drafts automatically, the transformer "steps down" household current to 20 volts to save wiring expense, the stack limit control is supposed to function as a "double-check" on the heating plant operation.

No. 2 unit supplies humidification, the parts being a room humidistat, solenoid valve, evaporator pan, transformer, and electric float switch.

Whenever the humidistat calls for humidity, the solenoid valve is automatically opened and supplies water to the evaporating pan which is placed in the bonnet of the furnace above the radiator. The transformer "steps" down household current, the electric float switch closes the humidity valve whenever the evaporating pan becomes filled with water.

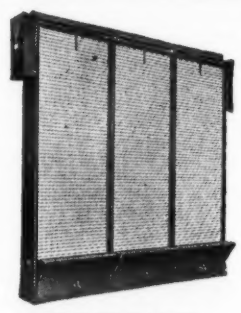
The No. 3 unit is a forced air circulation and filtering unit for furnace systems. This unit consists of a planoidal blower and a series of dry filters.

Outputs up to 1,000 c.f.m. are said to be obtainable on low resistance circuits. The volume is adjustable by means of the 100-speed control.

Combinations of the No. 2 and 3 units can be made up for various types of home heating systems.

CLEANING..*the first step* IN AIR CONDITIONING

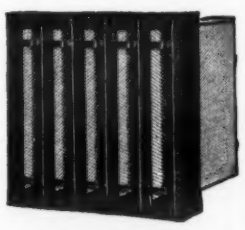
An essential of every air conditioning system, large or small, is efficient air filtration. If cleaning is made the first step in air conditioning, the filter further serves to protect the equipment and to insure its efficient operation. American Air Filters are available in a wide range of designs to meet every air cleaning requirement at minimum cost. Write for complete descriptive literature.



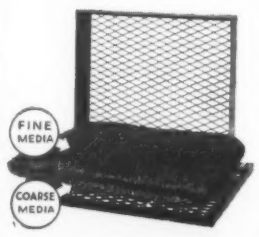
MULTI-PANEL AUTOMATIC

Where a large volume of air is to be conditioned this automatic filter offers the advantages of a constant, uniform air supply with a minimum of maintenance and attention. Widely used in commercial and industrial air conditioning where high efficiency and positive performance are of prime importance.

The original dry air filter, using an inexpensive, easily renewed filtering material. The patented Airmat filter paper has higher cleaning efficiency with lower resistance to air flow than any other dry filtering material. May be maintenanced either by vacuum cleaning or renewing the filter sheets.



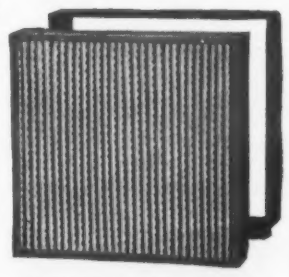
AIRMAT POCKET TYPE



RENU-VENT

This filter has established a new high standard of performance for renewable type filters in ventilating service. Simple in construction, efficient and easily maintenanced by renewing the filter pad after it has accumulated its full dust load.

A filter element consisting of a continuous sheet of Airmat filtering material folded back and forth over corrugated paper spacers and enclosed in a heavy cardboard channel section. When the filter has accumulated the full dust load the element is easily removed from the permanent steel frame and thrown away.

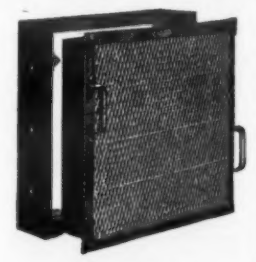


AIRMAT DRIFILTER

THROWAY

Built with heavy cardboard casing, the whole unit to be discarded after it has served its maximum period of usefulness. Highly suited for use with unit air conditioners or domestic air conditioning systems where most of the air is recirculated.

The original viscous air filter introduced in 1920. Constructed on the unit principle with a standard steel frame and interchangeable cell. Its rugged construction, high efficiency and large dust-holding capacity meet all the requirements of heavy duty air cleaning service.



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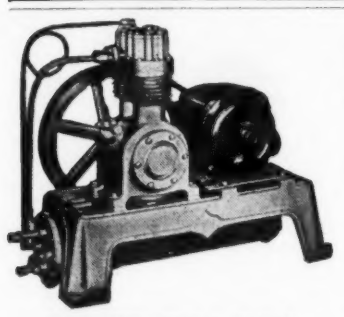

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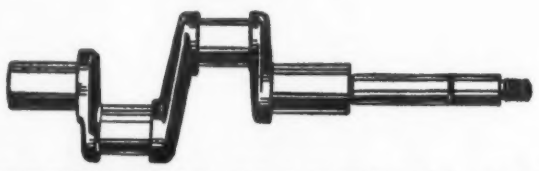

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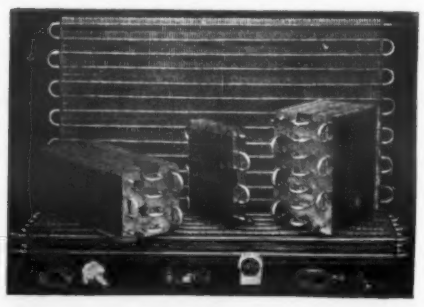

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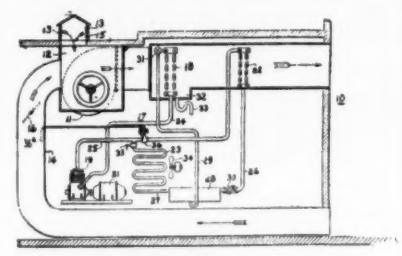
PATENTS

Issued Jan. 8, 1935

1,986,863. COOLING AND DEHUMIDIFYING SYSTEM. Matson C. Terry, Detroit, Mich., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Nov. 10, 1932. Serial No. 645,070. 4 Claims. (Cl. 62—6.)

2. In a system for cooling and dehumidifying air for an enclosure, the combination of a refrigerating system including



1,986,863

an evaporator, a condenser and a compressor for translating refrigerant from the evaporator to the condenser, said condenser embodying primary and secondary elements connected in parallel relation, valve means for varying the distribution of refrigerant to said condenser portions, means for cooling the secondary element of the condenser by circulating an extraneous fluid in heat-exchanging relation therewith, and means for circulating air for the enclosure, first, over the evaporator element of the refrigerating system for depressing its dew point temperature and, thence, over the primary element of the condenser in the refrigerating system for increasing its dry bulb temperature a portion of the temperature reduction effected by the evaporator.

1,986,873. AIR COOLING METHOD AND MEANS. Jacob B. Yoch, St. Louis, Mo. Application April 22, 1932. Serial No. 606,888. 9 Claims. (Cl. 261—119.)

1. The method of producing a spray, which comprises passing a stream of air in proximity to a body of water so as to entrain particles of the water, beating the water-laden stream to break up the particles of water into still finer particles, and then impinging the water-laden stream against the body of water.

1,986,905. COMPRESSOR AND SEALING MEANS THEREFOR. Francis A. Wegener, Gloucester, N. J., assignor to Welsbach Co., Gloucester City, N. J., a corporation of New Jersey, Application June 8, 1926. Serial No. 114,466. 13 Claims. (Cl. 286—11.)

1. In apparatus having a rotatable shaft, a casing, bearings in said casing for said shaft, there being a chamber in said casing exteriorly of one of said bearings and in free communication with the interior of the casing, a threaded portion on the shaft within the chamber, and sealing means for the shaft in said chamber and threaded onto said threaded portion, said sealing means comprising a unit assembly adapted for bodily removal from the shaft.

1,986,959. REFRIGERANT COMPOSITION. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Co., New York, N. Y., a corporation of New Jersey. Application Feb. 6, 1931. Serial No. 513,876. 2 Claims. (Cl. 252—5.)

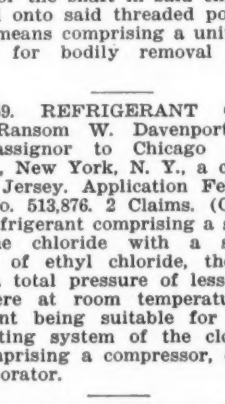
1. A refrigerant comprising a solution of methylene chloride with a substantial quantity of ethyl chloride, the solution having a total pressure of less than one atmosphere at room temperatures, such refrigerant being suitable for use in a refrigerating system of the closed cycle type comprising a compressor, condenser, and evaporator.

1,986,963. COMPOSITION FOR TREATING THE LIQUID CONTENTS OF HEATING AND COOLING SYSTEMS. Wilson Evans, Hinsdale, Gail J. Fink, La Grange, and Herbert A. Kern, Hinsdale, Ill., assignors to National Aluminate Corp., Chicago, Ill., a corporation of Delaware. No Drawing. Application Feb. 5, 1934. Serial No. 709,788. 14 Claims. (Cl. 252—5.)

2. A composition for preventing incrustation in water-containing systems, which comprise an alkaline reacting sodium phosphate, a water soluble carbohydrate, and sufficient acid to yield a mixture that has a hydrogen ion concentration of approximately pH_7.

1,986,978. METHOD AND APPARATUS FOR COOLING AND CONDITIONING AIR INCLOSURES. William J. Madden, Lansdowne, Pa. Application July 10, 1933. Serial No. 679,747. 17 Claims. (Cl. 62—176.)

1. A method of cooling and conditioning air in an enclosure which consists of admitting fresh air from the outside at-



1,986,978

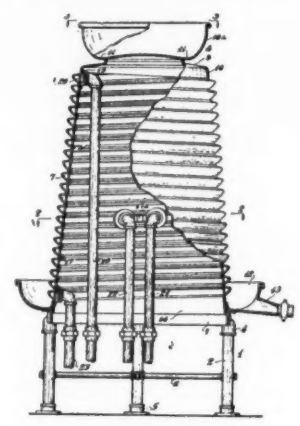
mosphere at one end of said inclosure into the interior thereof, drawing substantially the whole body of used air in the central region of the inclosure in parallel strata toward the end thereof, cooling said used air in transit by contact of each stratum with a refrigerant medium, mixing the cooled air with the fresh air admitted from the atmosphere, and discharging the mixed air into the innclosure near the top thereof.

1,986,993. REFRIGERATOR FOR SOLID CO_2. John H. Wooll, San Francisco, Calif. Application April 15, 1932. Serial No. 605,541. Renewed May 19, 1934. 3 Claims. (Cl. 62—91.5.)

1. In combination, a receptacle having a space for products to be refrigerated and including walls of heat insulating materials, a container partially encased by and extending from one of said walls with the closed end of said receptacle in said space to position a quantity of solid carbon dioxide in heat exchange relationship with said space, and a fibrous lining for said container wetted so as to be frozen by said solid carbon dioxide and thereby impregnated with ice to control heat removal from said space.

1,987,123. HEATER OR COOLER. Clifford Morrow, Canton, Ohio, assignor to The H. H. Miller Industries Co., Canton, Ohio, a corporation of Ohio. Application Jan. 20, 1933. Serial No. 652,637. 11 Claims. (Cl. 257—179.)

2. A surface heater or cooler comprising tubing bent into spiral form, said tubing having a rear wall and upper and



1,987,123

lower converging walls connected along their outer portions, and said rear wall provided along its upper and lower edges with flanges welded in edge to edge relation to the flanges of upper and lower convolutions of the tubing, means for distributing liquid on the upper convolution of the tubing, and means for supplying a heat transfer medium to said tubing.

1,987,170. REFRIGERATION. Gordon Varney, Bradenton, Fla. Application Sept. 11, 1931. Serial No. 562,242. 14 Claims. (Cl. 62—104.)

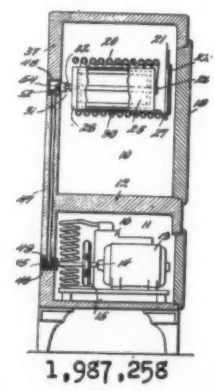
1. In a refrigeration apparatus, means to submerge an article and propel the same through a refrigerated fluid, means for refrigerating said fluid and separate means for refrigerating said propelling means.

1,987,188. AIR CONDITIONING SYSTEM AND METHOD. Edward L. Garfield, Scarsdale, N. Y. Application Nov. 18, 1930. Serial No. 496,424. 6 Claims. (Cl. 62—176.)

6. In a method of conditioning air, the steps of spraying cooled water into the air to be conditioned, dividing the water after spraying into two parts, delivering one part directly to a receptacle, spraying the other part over ice, varying the quantity of the part sprayed over the ice as the area of the ice is reduced by melting, collecting the part sprayed over the ice in the receptacle with the first part, the mixture in the receptacle providing the cooled spraying water for spraying into the air and providing it at a substantially constant temperature as the ice melts, and controlling the variation of the amount of the part sprayed over the ice by the temperature of the water being sprayed into the air.

1,987,258. REFRIGERATING APPARATUS. Bertram Y. Kinzey, Berea, Ohio. Application Feb. 11, 1933. Serial No. 656,336. 12 Claims. (Cl. 62—116.)

1. In refrigerating apparatus for domestic use, the combination with an ice tray receiving chamber having a front opening



1,987,258

through which ice trays may be introduced, of a dessert container, fitting within said chamber, agitating means within said container, and means positioned at the rear of said chamber for effecting a driving coupling with said agitating means to operate the latter, said last named means including a self-aligning positive clutch.

1,987,422. METHOD OF MAKING HEAT EXCHANGE APPARATUS. Christian Steenstrup, Schenectady, N. Y., assignor to General Electric Co., a corporation of New York. Application June 14, 1934. Serial No. 730,590. 6 Claims. (Cl. 29—157.3.)

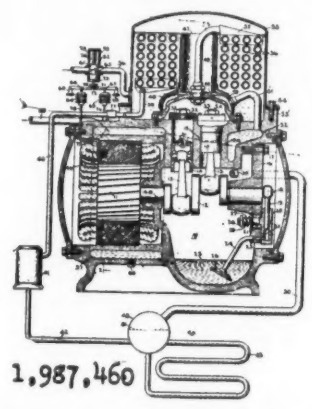
1. The method of securing a conduit to a plurality of the walls of a metal cabinet or similar structure which comprises placing the conduit on a metal sheet of which said walls are to be formed, frictionaly securing said conduit to said sheet, and bending the assembled sheet and conduit and sliding the conduit with respect to one of said walls to bend the conduit at the bend in said sheet with a radius of curvature substantially greater than that of the bend in said sheet.

1,987,423. REFRIGERATED CABINET. Frank R. Stewart and Truman O. Spencer, Indianapolis, Ind., assignors to Hurty-Peck & Co., Indianapolis, Ind., a corporation. Application July 11, 1932. Serial No. 621,884. 2 Claims. (Cl. 220—9.)

1. In a refrigerated cabinet for bottled goods, the combination of four vertical corner members having L-shaped cross section, an additional vertical member secured in the angle of each of said L-shaped members and extending from the lower ends thereof to a point between their upper and lower ends, horizontal members forming a horizontal frame resting upon said last mentioned vertical members, a horizontal layer of insulation material rigidly supported upon said frame, vertical side plates of sheet metal having their vertical edges extending within the angles of said L-shaped corner members, and their lower edges supported by said horizontal frame, vertical layers of insulation material adjacent the inner surfaces of said side plates, a rectangular sheet metal container resting upon said horizontal insulation layer and having its side walls adjacent said vertical insulation layers, and a closure for the top of said container.

1,987,460. REFRIGERATING MACHINE. Leonard W. Atchison, Schenectady, N. Y., assignor to General Electric Co., a corporation of New York. Application Aug. 12, 1933. Serial No. 684,831. 11 Claims. (Cl. 62—115.)

1. A refrigerating machine including a compressor having a chamber for compressed refrigerant, means including a



1,987,460

condenser for liquefying refrigerant received from said chamber, a closed casing surrounding said condenser, means for admitting cooling water to said casing, and means including a baffle spaced from the walls of said chamber for directing a positive circulation of cooling water first over said condenser and then over the walls of said chamber.

1,987,510. REFRIGERATING APPARATUS. Jesse G. King, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a corporation of Delaware. Original application March 31, 1928. Serial No. 266,284. Divided and this application Aug. 8, 1934. Serial No. 739,037. 8 Claims. (Cl.62—4.)

1. A refrigerating system comprising in combination an evaporator, a liquefying unit for withdrawing gaseous refrigerant from and returning liquid refrigerant to the evaporator, control means for cyclically operating the unit by starting and stopping the operation of the unit at predetermined high and low temperatures to produce a mean average temperature in the evaporator, means for modifying the control means to produce cycles of operation of said unit to effect different mean temperatures, said modifying means including means for rendering said modifying means inoperative to effect said control means after a single cycle of operation, and means for rendering said last named means inoperative whereby said liquefying unit will cycle continuously under the control of said modifying means to continuously produce said different mean temperatures in said evaporator.

1,987,521. COOLING SYSTEM. Leslie E. Smitley and Frank S. Moore, Los Angeles, Calif. Application Jan. 3, 1934. Serial No. 705,114. 4 Claims. (Cl. 62—24.)

1. In a cooling system for the interior of a mobile body, a compressed air storage source adapted to be carried by said body, means adapted to be supported by said body for supplying compressed air to said source, a compressed air conducting line leading from said source and having a stretch thereof arranged within said body at the top of the latter, spaced pipes permanently communicating with and depending from said stretch, independently operable compressed air discharge controlling valve structures anchored to said pipes, an upstanding closed top receptacle suspended from each of said structures and containing a refrigerant and formed at its lower portion with a cold air receiving chamber privided with an outlet, the said refrigerant being arranged over said chamber, and a discharge pipe for cooled compressed air within and extended from the upper end of said receptacles to and opening into one of said structures, said discharge pipe opening into said receiving chamber and embedded in said refrigerant.

REISSUE

19,415. REFRIGERATION SYSTEM AND APPARATUS. George E. Hulse, New Haven, Conn., assignor to The Safety Car Heating & Lighting Co., a corporation of New Jersey. Original No. 1,943,966, dated Jan. 16, 1934. Serial No. 490,598. October 23, 1930. Application for reissue Oct. 30, 1934. Serial No. 750,711. 34 Claims. (Cl. 62—117.)

6. In refrigeration apparatus, in combination, a relatively high voltage motor for driving an element of said apparatus, a relatively low voltage motor for driving said element, means responsive to the effective condition of the circuit supplying energy to one of said motors for preventing the operation of the other motor, a thermostatic switch, and means for automatically placing said thermostatic switch in the effective circuit.

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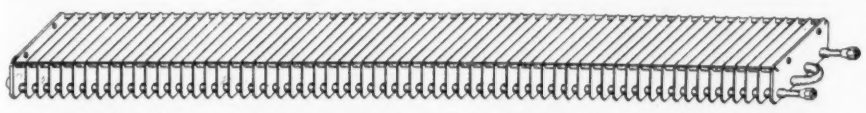

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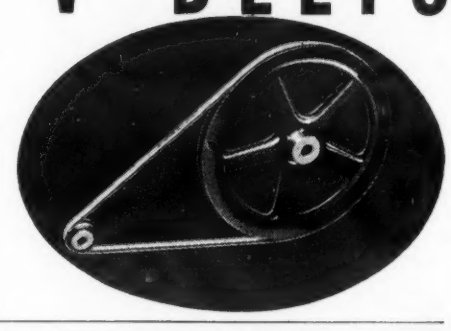

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1 subscription	$3.00	$5.00	$6.50
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1-23-35

QUESTIONS

Commercial Equipment

No. 2032 (Exporter, New York)—"We have an inquiry from one of our customers abroad for 'a line of commercial refrigerators for handling ice cream and ice blocks, also display counters for delicatessens, etc., also equipment for hotels handling bottled and draught beer.'

"Can you give the names of any such manufacturers?"

Answer: Manufacturers of ice cream cabinets are listed beginning page 223 of the 1934 REFRIGERATION DIRECTORY AND MARKET DATA BOOK, manufacturers of ice cream freezer cabinets are listed beginning on page 225, manufacturers of ice making cabinets beginning on page 225, manufacturers of low temperature cabinets beginning on page 229, and manufacturers of refrigerated display counters beginning on page 281.

Manufacturers of beer cooling equipment are listed starting on page 151.

These lists will be revised and brought up to date in the 1935 REFRIGERATION DIRECTORY AND MARKET DATA BOOK, which will be off the press on or about February 20.

Aluminum Ice Trays

No. 2033 (Manufacturers' representative, California)—"Can you put me in touch with a source of supply on aluminum trays 10¼ in. long, 5⅝ in. wide, 1-9/16 in. deep, same to have aluminated finish to withstand effect of water, and to have a grid with 28 cubes?

"If I made a satisfactory connection on above trays could sell 5,000 or over during 1935."

Answer: Manufacturers of ice cube trays are listed on page 204 of the 1934 REFRIGERATION DIRECTORY. Any of the manufacturers listed should be able to supply you with anodically treated trays.

This list will be revised and brought up to date in the 1935 REFRIGERATION DIRECTORY.

Copies of Patents

No. 2034 (Distributor, Italy)—"Our chief engineer would greatly appreciate receiving a copy of Patent No. 1,980,945, which was illustrated in a recent copy of ELECTRIC REFRIGERATION NEWS.

"We do not know just what service you are in a position to give to your overseas subscribers on such matters. In any case please let us know by return mail if we may write to you direct or just what the procedure may be."

Answer: Printed copies of patents are furnished only by the Patent Office, at a cost of 10 cents each. For such copies address: Commissioner of Patents, Washington, D. C.

Service Manual

No. 2035 (Service man, W. Virginia)—"Can you furnish me with the name and address of the company that publishes a complete service manual on all makes of electric refrigerators. Also the names and addresses of several companies that sell parts for all makes of electric refrigerators."

Answer: We are actively working on plans for a MASTER SERVICE MANUAL, but at the present time we cannot make a definite announcement regarding it.

We are working now on the 1935 edition of the REFRIGERATION DIRECTORY AND MARKET DATA BOOK, which we expect to issue on or about Feb. 20, 1935. We hope to bring out the proposed manual soon after the DIRECTORY is completed.

In the meantime we refer you to the series of articles on "orphan" makes of electric refrigerators which have been published this year (a list of the issues in which the articles appear can be found on page 12 of the Dec. 26 issue). The principles of operation covered in these articles are characteristic of most of the refrigeration systems in operation today.

We also refer you to the various lessons in the home study course offered by the Refrigeration & Air Conditioning Institute of Chicago which we are now publishing. (See the Nov. 14, Dec. 19, and Jan. 2 issues.)

Suppliers of replacement parts for electric refrigerators are listed starting on page 302 of the 1934 REFRIGERATION DIRECTORY. This list will be revised in the 1935 REFRIGERATION DIRECTORY.

$3 Ice Maker

No. 2036 (Manufacturing agent, Spain)—"Having learned your address through the medium of the United States consul in Barcelona, I am asking you to send me by return mail, the following data:

"For sale in the North American market is an apparatus designed to produce ice, of economic type, which I understand is sold at $3, and which is in the form of a rectangular box which is placed suspended and up against a kitchen wall.

"It would interest me to know the exact address of the manufacturer of these units in order to acquire representation in Spain, and in this event I should be very grateful to you, if you could send me this data."

Answer: We do not know the name of a manufacturer of an ice maker which sells for $3.00.

Perhaps if you could give us a better description of the product which you have in mind, we might be able to locate the manufacturer. Can you tell us in what manner the ice, or refrigerating effect, is obtained?

Cooling Bottled Water

No. 2037 (Water company, Pennsylvania)—"It was suggested to us that the most efficient way to cool bottled water in an electric water cooler was to run the refrigeration coil directly in the drinking water in a stoneware crock. There would be no fittings in the crock, the expansion valve to be placed on the outside.

"What you do think of this arrangement? Do you think there is any better method?"

Answer: We are not in a position to pass judgment on a proposition of this type. Our suggestion is that you address this question to manufacturers of water cooling equipment and commercial refrigeration systems.

Manufacturers of commercial refrigeration systems are listed starting on page 258 of the 1934 REFRIGERATION DIRECTORY, and manufacturers of water cooling systems, starting on page 329.

Dealers Across the Pacific

No. 2038 (Manufacturers' representative)—"We write to inquire if you have a list of refrigeration dealers in Manila, Australia, and New Zealand.

"Possibly the new book that we recently told you to send us will have this list in it.

"If not, we would appreciate very much, indeed, if you would advise us where we could get these lists."

Answer: While most of the leading manufacturers of electric refrigerators have very kindly furnished us with their list of dealers for subscription purposes, this cooperation has always been given with the understanding that we would not make the names available to others.

We hope, in time, to be able to furnish a complete classified mailing service, but it does not appear that the manufacturers would agree to such a plan at present.

It might be possible to obtain such lists by writing direct to the manufacturers.

David Levinson's Address

No. 2039 (Manufacturer, Ohio)—"Will you kindly send us the address of Mr. David Levinson, the Crosley distributor for Palestine?"

Answer: Address of Mr. David Levinson, Crosley distributor for Palestine, is Levinson Bros., P. O. Box 579, Tel-Aviv, Jaffa, Palestine.

Commercial Machines

No. 2040 (Distributor, Norway)—"As one of the largest distributors in this country of refrigerators, we want to add to our organization the handling of refrigeration machinery for commercial installations.

"We refer to ..... whom we are representing in this country, but who do not manufacture machinery units. They have given us your address, and we should be very pleased to receive names of manufacturers of refrigerators for commercial purposes as well as air conditioning."

Specifications

No. 2041 (Dealer, W. Virginia)—"I understand that you publish a REFRIGERATION DIRECTORY AND MARKET DATA BOOK. It is my desire to know if this book contains the inside dimensions of all refrigerators, also the dimensions of the freezing chambers in which the trays are used, and the displacement of the units in relation to the distance from the door.

"Will the 1935 edition contain this information on all older model refrigerators?"

Answer: Specifications of all major makes of household electric refrigerators are contained in the 1934 REFRIGERATION DIRECTORY AND MARKET DATA BOOK. This information was later revised and published again in complete form in the May 30 issue of ELECTRIC REFRIGERATION NEWS.

The specifications include data covering the inside and outside dimensions of all refrigerator cabinets, but do not show data on the dimensions of the evaporator or the displacement of the units in relation to the distance from the door. However, the specifications do give other valuable information including gross and net food storage capacity, number of shelves, total shelf area, the number of ice cube trays, and the total number of cubes by weight of the cubes in pounds. Information on the type and make of equipment including compressor, motor, control, evaporator, and condenser are also given.

Specifications of household refrigerators for past years will not be included in the 1935 DIRECTORY, and if you desire information on models for 1934 we would suggest that you obtain a copy of the 1934 REFRIGERATION DIRECTORY which is still available at $3, or a copy of the May 30 issue of ELECTRIC REFRIGERATION NEWS which may be obtained for 10 cents.

We will begin the work of compiling complete specifications on household electric refrigerators covering 1935 lines within a short time. This information will be published in ELECTRIC REFRIGERATION NEWS as soon as the task is completed.

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POSITIONS AVAILABLE

ESTABLISHED MANUFACTURER desires district representative to service existing distributors and secure additional outlets for air conditioning and commercial refrigeration in Middle Atlantic States. Engineering knowledge and previous experience this type of work essential. Opportunity for permanent profitable connection to right man. Box 669, Electric Refrigeration News.

SERVICE MANAGER—Experienced man to take full charge of service and repair department for distributor of a leading refrigerator. Must be competent refrigerator engineer, able to train and direct men and understand clerical and accounting practices. Box 670, Electric Refrigeration News.

POSITIONS WANTED

AM 30 YEARS of age—married—have sufficient experience in air-conditioning business to handle complete distributor operation. Desire to correspond with a responsible distributor with a view to working out a profit sharing and drawing account arrangement. Could be of assistance in securing an air conditioning distribution franchise if desired. Box 667, Electric Refrigeration News.

PUBLICITY and ADVERTISING manager, now employed by gas and electric utility, seeks larger opportunity with utility company or appliance manufacturer. Work with present company has won wide recognition and good sales results. Sales promotion and actual sales experience. Salary, $4,000. Samples of work on request. Box 668, Electric Refrigeration News.

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ISOBUTANE: We ship Isobutane in your cylinders at: 5 lbs.—$1.50 per lb., 10 lbs.—$1.35, 25 lbs.—$1.10, 50 lbs.—$1.00. In our cylinders of 115 lbs. at $0.80. Shipments made the same day we receive orders. The Standard Refrigeration Co. of Pgh., 1148 Dohrman St., McKees Rocks, Pa.

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WANTED commercial Frigidaire and Kelvinator parts. Also buy large refrigerators and large household Frigidaires. We have a representative in New Jersey and New York City. Lawton Huffman Co., Marshalls Creek, Pa. Phone Stroudsburg 18-R-5.

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WE ARE specializing in repairing receiver tanks, ½ HP Frigidaire-Kelvinator $12. One HP, $15. Grinding, polishing shafts up to ½ HP Frig-Kel etc. 50¢, 1 HP. 75¢. Rebushing seals up to ½ HP. Frig-Kel. 75¢, 1 HP. 95¢. Silver welding ice cream coils with cadmium plating. Quantity discounts. Refrigeration Maintenance Company, 719 Atlantic Ave., Brooklyn, N. Y.

SCHOOLS

MEN: Train for Refrigeration and Air Conditioning, at home, using same text material you would use in best resident school. Supervised individual instruction under licensed teacher with Doctor's degree. Shoeck School, Alton, Ill.

PATENT SERVICE

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. Van Deventer (ASRE), Patent Attorney, 342 Madison Avenue, New York City.